

**REFERENCE
MATERIALS
FOR VALUING
AGRICULTURAL
LAND FOR
MARCH 1, 2008**

BASE RATE \$1,200

Index

Pages:

1-5	General Notes
6 & 7	Pages 99 & 100 from the Real Property Assessment Guidelines from the 2002 General Reassessment covering the valuation of agricultural land
8 & 9	Certification of Agricultural Land Base Rate Value for the Assessment Year of March 1, 2008
10-14	A paper written by Dr. D. Howard Doster & Dr. John M. Huie titled "A Method for Assessing Indiana Cropland - An Income Approach to Value" dated June 24, 1999.
15	DLGF Summary updated for current calculations
16	Cash Rent Calculations
17-22	Purdue Agricultural Economics Reports (PAER) which support Cash Rent calculations shown on page 16
23 & 24	DLGF study on Average Net Tax Bill per Acre of Farmland
25-29	Interest Rate Summary & Supporting Documentation
30	Income Approach Summary for Producer-Owned Farm Ground
31	Calculation of Production Costs for Corns & Soybeans
32-34	Yields & Supporting Documentation
35-37	Grain Prices & Supporting Documentation
38-49	Purdue Crop Guides for the years of 2000 - 2005
50-57	Calculation of Average Government Payments per Acre
58	An Overview of How the Calendar Is Used In Calculating the Agricultural Land Base Rate

**General Notes for the Agricultural Land Market
Value in Use for March 1, 2008 Rate of \$1,200**

December, 2007

History:

The Real Property Assessment Guidelines contain a section on valuing agricultural land based on its value in use. A summary of our calculations can be found in Chapter 2, Page 100 of these guidelines, in Table 2-18. For the 2002 reassessment, the base rate for agricultural land calculated to be \$1,050. Pursuant to 50 IAC 21-6-1(a), the department issued the annual rate for 3/1/05 to be \$880. In the 2005 legislative session, SEA 327 was passed. This bill contained a non-code provision that set the base rate for agricultural land for both March 1, 2005 and March 1, 2006 at \$880. SEA 327 also contained language for March 1, 2007 which instructed the Department of Local Government Finance to adjust our methodology from a four year rolling average to a six year rolling average. The base rate for March 1, 2007 was calculated to be \$1,140 per acre.

Table 2-18 – Years:

For March 1, 2008, the six years used were 2000, 2001, 2002, 2003, 2004 and 2005.

Table 2-18 – Net Income from Cash Rents:

Since agricultural land in Indiana is nearly evenly divided between cash rent and owner-occupied production, our agency used an average of both types of income in our calculation.

The data for cash rents came from three Purdue Agricultural Economics Reports (PAER). For the 2000 & 2001 rents, go to Table 2 of Page 3 of the September of 2001 report. For the 2002 & 2003 rents, go to Table 2 of Page 3 of the August of 2003 report. For the 2004 & 2005 rents, go to Table 2 of Page 3 of the August of 2005 report. From these tables, we used the statewide averages for average soil.

There was an adjustment to these amounts to reduce the rents for property taxes paid on the land. This adjustment was based on a study conducted by the Department of Local Government Finance.

Table 2-18 – Net Income from Operating:

This income represents the profits from the owner-occupied production of crops on agricultural land.

The foundation for the calculations that our agency adopted comes from Table 1 of the June 24, 1999 Doster/Huie report.

Doster/Huie Report – Table 1-Years:

This report used the years of 1996, 1997, 1998, & 1999. The year of 1999 was removed from our 2002 calculations since our calculations were based on January 1, 1999. Information for 1995 was obtained and added to our calculations. (Also note the date of June 24, 1999 for the report which means that six months of data had been estimated.)

Doster/Huie Report – Table 1-Yields:

The yields in this report were obtained from the Indiana Agricultural Statistics Service (IASS) for both corn and soybeans. The IASS publishes these statistics on an annual basis. Yield information for these four years can be found in the 1999-2000 publication for corn on page 31 in the Final Yield per Acre column of the Crop Summary section and on page 32 for soybeans.

Doster/Huie Report – Table 1-Prices:

The prices used in this report were for the month of November. They can found on page 82 of the IASS publication. Note: Our agency made an adjustment to this part of the calculation because the majority of the grain harvested in Indiana is not sold in November but throughout the year. This adjustment will be discussed later.

Doster/Huie Report – Table 1-Sales:

Yields for each type of crop (corn/soybeans) multiplied by the Price per Bushel for each type of crop equals Sales.

Doster/Huie Report – Table 1-Less Variable Costs:

This information can be found in the Purdue Crop Guide. This guide is an annual publication (ID-166). The dollar amount for each crop type can be found in section titled “Estimated XXXX (year) Per Acre Production Costs in the column for Corn/Soybean Rotation for Average Soil. See the line for “Total direct cost per acre at harvest”. The costs include labor, seed, fertilizer, chemicals, machinery repairs, and fuel.

Doster/Huie Report – Table 1-Crop Contribution Margin:
Sales less Variable Costs equal Crop Contribution Margin for each type of crop (corn/soybeans).

Doster/Huie Report – Table 1-Plus Government Payment:
The publication adds government payments as a source of additional revenue for the land. This amount for each year was estimated by the authors of the publication.

Doster/Huie Report – Table 1-Total Contribution Margin:
This number represents the average of the Crop Contribution Margin for corn and soybeans plus one-half (1/2) of the amount for the government payment. (The sum of the three numbers divided by two.)

Doster/Huie Report – Table 1-Less Overhead:
The overhead expense for machinery, drying/handling, & family/hired labor can be found on the Purdue Crop Guide (ID-166). The dollar amount for each crop type can be found in section titled “Estimated XXXX (year) Per Acre Production Costs in the column for Corn/Soybean Rotation for Average Soil. See the lines for “Indirect charges per acre”.

Doster/Huie Report – Table 1-Real Estate Tax:
A deduction of \$10 for real estate taxes was estimated by the authors.

Doster/Huie Report – Table 1-Income:
Total Contribution Margin less the Overhead Expenses of machinery, drying/handling, labor, & real estate taxes equals Income.

Doster/Huie Report – Table 1-Estimated Land Value:
The authors of the paper then averaged the four years (1996 – 1999) income and divided it by a 1999 interest rate to arrive at an Estimated Land Value of \$971.

Table 2-18 – Net Income from Operating:
This income represents the profits from the owner-occupied production of crops on agricultural land. While the foundation for the calculations that our agency adopted comes from Table 1 of the June 24, 1999 Doster/Huie report, we did make some alterations to it.

Adjustments Made To The Doster/Huie Report By Our Department:

Years:

We added the statistics for 1995 which were available and deleted the estimates for 1999 since interest rates and income data were not available. For the calculation for 3/1/05, we began with 1999.

Price:

We added two averages to the Doster/Huie report since this report used only November prices. Since only a small portion of Indiana's grain is sold in November, the Department of Local Government Finance developed two annual averages for the calculation. The first average was the calendar year average of the grain prices which are published in the IASS book. The second average was the market year average. This average is calculated by the IASS and is a weighted average that is based on the end of the month grain price and the percentage of the total grain harvested that was sold that month.

Interest Rate:

Instead of using the 1999 St. Paul Farm Credit Bank interest rate, we chose to use the quarterly farm loan rates published by the Federal Reserve Bank of Chicago. The FRBC publishes an agricultural newsletter on a quarterly basis called the "AgLetter". This newsletter provides interest rates on farm loans for operating loans, feeder cattle, and real estate. The Department averaged the interest rates for the operating loans and real estate categories. A study was conducted on different sources of interest rates between Purdue Agricultural Economics Reports, the St. Paul Farm Credit Bank, and the Federal Reserve Bank of Chicago. The study found that the rates varied from year to year but when averaged out over the four year period were comparable.

SUMMARY:

When comparing the data compiled to calculate the \$1,140 base rate for March 1, 2007 to the data compiled to calculate the \$1,200 base rate for March 1, 2008, the study of two separate sets of data are worth noting.

The first comparison of the data covers the removal of the 1999 data and the addition of the 2005 data. Net Cash Rents increased from \$99 in 1999 to \$110 on 2005. Yields for corn increased from 132 bushels in 1999 to 154 bushels in 2005 and yields for soybeans increased from 39 bushels in 1999 to 49 bushels in 2005. Prices for corn decreased from \$2.11 in 1999 to \$1.99 in 2005 (market year average) while prices for soybeans increased from \$5.05 in 1999 to \$5.66 in 2005 (market year average). Interest rates also dropped from 8.77% in 1999 to 7.22% in 2005.

The second comparison of the data covers the changes that occurred between 2004 and 2005. While Net Cash Rents increased from \$104 in 2004 to \$110 in 2005, Net Operating Incomes were cut in half as income dropped from \$135 in 2004 to \$60 in 2005. Reasons for this decrease include: yields for corn decreasing from 168 bushels in 2004 to 154 bushels in 2005 and yields for soybeans decreasing from 51.5 bushels in 2004 to 49 bushels in 2005. Prices for corn decreased from \$2.53 in 2004 to \$1.99 in 2005 (market year average) while prices for soybeans decreased from \$7.67 in 2004 to \$5.66 in 2005 (market year average). While lower yields and lower prices affected the gross income, higher variable costs made it more expensive for Indiana's farmers to produce their crops. Dr. Alan Miller of Purdue University says that higher fuel costs are the main reason for the increase to production (variable) costs. These costs increased from \$171 to \$184 for corn and \$106 to \$114 for soybeans. This type of shift from one year to the next demonstrates the volatility of the industry and supports the legislative action to use a six-year average to develop a base rate.

Valuing Agricultural Land

The agricultural land assessment formula involves the identification of agricultural tracts using data from detailed soil maps, aerial photography, and local plat maps. Each variable in the land assessment formula is measured using appropriate devices to determine its size and effect on the parcel's assessment. Uniformity is maintained in the assessment of agricultural land through the proper use of soil maps, interpreted data, and unit values.

In order to apply the agricultural land assessment formula, you need to understand the following topics, which are discussed in the sections below:

- agricultural land base rate values
- assessment of agricultural land
- units of measurement for agricultural land
- classification of agricultural land into land use types
- use of soil maps
- calculating the soil productivity index
- valuation of strip mined agricultural land
- valuation of oil and gas interests

The rest of the chapter provides instructions for completing the "Land Data and Computations" section of the agricultural property record card.

Agricultural Land Base Rate Value

The 2002 general reassessment agricultural land value utilizes the land's current market value in use, which is based on the productive capacity of the land, regardless of the land's potential or highest and best use. The most frequently used valuation method for use-value assessment is the income capitalization approach. In this approach, use-value is based on the residual or net income that will accrue to the land from agricultural production.

As illustrated in the following equation, the market value in use of agricultural land is calculated by dividing the net income of each acre by the appropriate capitalization rate.

$$\text{Market value in use} = \text{Net Income} \div \text{Capitalization Rate}$$

The net income of agricultural land can be based on either the net operating income or the net cash rent. Net operating income is the gross income received from the sale of crops less the variable costs (i.e. seed and fertilizer) and fixed costs (i.e. machinery, labor, property taxes) of producing crops. The net cash rent income is the gross cash rent of an acre of farmland less the property taxes on the acre. Both methods assume the net income will continue to be earned into perpetuity.

The capitalization rate converts the net income into an estimate of value. The capitalization rate reflects, in percentage terms, the annual income relative to the value of an asset; in this case agricultural land. Conceptually, this capitalization

rate incorporates the required returns to various forms of capital, associated risks, and the anticipated changes over time.

Since agricultural land in Indiana is nearly evenly divided between cash rent and owner-occupied production, the State Board of Tax Commissioners utilized a four-year rolling average (1995 to 1998) of both methods in determining the market value in use of agricultural land. The capitalization rate applied to both types of net income was based on the annual average interest rate on agricultural real estate and operating loans in Indiana for this same period. The table below summarizes the data used in developing the average market value in use.

Table 2-18. Agricultural Land market value in use

YEAR	NET INCOMES		CAP. RATE	MARKET VALUE IN USE		Average
	Cash Rent	Operating		Cash Rent	Operating	
1995	\$88	\$56	9.92%	\$887	\$565	\$ 726
1996	\$94	\$131	9.29%	\$1012	\$1410	\$1,211
1997	\$100	\$124	9.31%	\$1074	\$1332	\$1,203
1998	\$102	\$91	9.10%	\$1121	\$1000	\$1,060
				Average Market Value		\$1,050
				in Use =		

The statewide agricultural land base rate value for the 2002 general reassessment will be the average market value in use calculated as shown above or \$1,050 per acre.

Assessing Agricultural Land

The agricultural land assessment formula involves identifying agricultural tracts using data from a detailed soil map, aerial photography, and local plat maps. Each variable of the land assessment formula is measured using various devices to determine its size and effect on the parcel's assessment. The proper use of the soil maps, interpreted data, and unit values results in greater uniformity in the assessment process of agricultural lands. Some commercial and industrial zoned acreage tracts devote a portion of the parcel to an agricultural use. The assessor classifies these parcels as either commercial or industrial. However, the portion of land devoted to agricultural use should be valued using the agricultural land assessment formula. Portions not used for agricultural purposes would be valued using the commercial and industrial acreage guidelines described in this chapter.

Converting Units of Measurement for Agricultural Land

Figure 2-23 shows the units of measurement commonly used to measure agricultural land. Table 2-19 describes equivalencies for these units of measurement.

STATE OF INDIANA

DEPARTMENT OF LOCAL GOVERNMENT FINANCE
PHONE (317) 232-3775
FAX (317) 232-8779



INDIANA GOVERNMENT CENTER NORTH
100 NORTH SENATE AVENUE N1058 (B)
INDIANAPOLIS, IN 46204

Certification of Agricultural Land Base Rate Value for Assessment Year 2008

This memorandum hereby serves to notify assessing officials of the agricultural base rate to be used for the March 1, 2008 assessment date: **\$1,200 per acre.**

Land used for agricultural purposes shall be adjusted consistent with the guideline methodology developed for the 2002 general reassessment agricultural land value except, in determining the annual base rate, the Department of Local Government Finance ("Department") shall adjust the methodology to use a six (6) year rolling average instead of a four (4) year rolling average. The Department will issue annually, before January 1, the base rate to be applied for the following March 1 assessment date. 50 IAC.21-6-1(a).

Those portions of agricultural parcels that include land and buildings not used agriculturally, such as homes, homesites, and excess land and commercial or industrial land and buildings, shall be adjusted by the factor or factors developed for other similar property within the geographic stratification. The residence portion of agricultural properties will be adjusted by the factors applied to similar residential properties. 50 IAC 21-6-1(b).

The 2008 assessment year agricultural land value utilizes the land's current market value in use, which is based on the productive capacity of the land, regardless of the land's potential or highest and best use. The most frequently used valuation method for use-value assessment is the income capitalization approach. In this approach, use-value is based on the residual or net income that will accrue to the land from agricultural production.

As illustrated in the following equation, the market value in use of agricultural land is calculated by dividing the net income of each acre by the appropriate capitalization rate.

$$\text{Market value in use} = \text{Net Income} \div \text{Capitalization Rate}$$

The net income of agricultural land can be based on either the net operating income or the net cash rent. Net operating income is the gross income received from the sale of crops less the variable costs (i.e. seed and fertilizer) and fixed costs (i.e. machinery, labor, property taxes) of producing crops. The net cash rent income is the gross cash rent of an acre of farmland less the property taxes on the acre. Both methods assume the net income will continue to be earned into perpetuity.

The capitalization rate converts the net income into an estimate of value. The capitalization rate reflects, in percentage terms, the annual income relative to the value of an asset; in this case agricultural land. Conceptually, this capitalization rate incorporates the required returns to various forms of capital, associated risks, and the anticipated changes over time.

Since agricultural land in Indiana is nearly evenly divided between cash rent and owner-occupied production, the Department utilized a six-year rolling average (2000 to 2005) of both methods in determining the market value in use of agricultural land. The capitalization rate applied to both types of net income was based on the annual average interest rate on agricultural real estate and operating loans in Indiana for this same period. The table below summarizes the data used in developing the average market value in use.

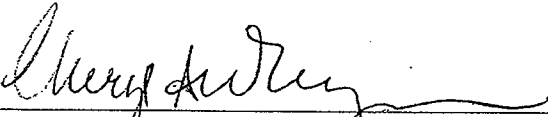
Table 2-18. Agricultural Land market value in use

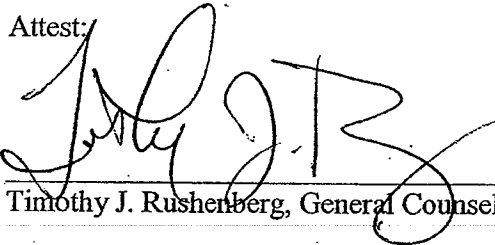
Source: Real Property Assessment Guidelines for 2002-Version A, Book 1, Chapter 2, pg. 100

NET INCOMES				MARKET VALUE IN USE		
Year	Cash Rent	Operating	Cap. Rate	Cash Rent	Operating	Average
2000	101	60	9.57%	1,055	627	841
2001	102	61	8.01%	1,273	762	1,017
2002	105	20	7.02%	1,496	285	890
2003	106	71	6.29%	1,685	1,129	1,407
2004	104	135	6.35%	1,638	2,126	1,882
2005	110	60	7.22%	1,524	831	1,177
Average Market Value in Use						\$1,200

The statewide agricultural land base rate value for the 2008 assessment year will be \$1,200 per acre.

Dated this 31st day of December, 2007.


 Cheryl A.W. Musgrave, Commissioner
 Department of Local Government Finance

Attest:

 Timothy J. Rushenberg, General Counsel

4/5/04

A Method for Assessing Indiana Cropland An Income Approach to Value

D. Howard Doster & John M. Huie, Purdue Ag Economists
June 24, 1999

Summary

A method for taxing agricultural cropland based on the income potential of the land can be developed. The method is illustrated below. Data components of this method include detailed soil maps, estimated yields and production costs by soil type, reported average yields by county, reported average Indiana November corn and soybean prices, USDA corn and soybean loan prices by county, and the interest rate on new Farm Credit Bank loans in the St Paul district.

Using this information, a land value can be calculated for each soil type in each county in Indiana. Using detailed soil maps, county staff can then calculate income, land value, and tax due for each ownership parcel.

Using state yields, prices, and costs for 1996, 1997, 1998, and estimates for 1999, income and land values are calculated below for average and high yield soil types. As shown in Table 1, the average land value is calculated to be \$971. In Table 2, the high yield land is valued at \$1510.

As shown in the tables, incomes for 1996 and 1997 are much higher than incomes for 1998 and projected 1999. Though not shown, income for 1995 was much higher than projected income for 1999.

Detailed soil maps

Maps from The Natural Resource and Conservation Service (NRCS) are now available for all counties indicating the soil type of all land in the state. County staff have used this information in past years. For five counties, this soil type information has been transferred to a GIS data base. In these counties, county staff could identify land ownership units in the GIS data base and with appropriate computer software, calculate the real estate tax on cropland.

In 1998, computer software was developed by Purdue Ag Economists for calculating income for user entered ownership parcels in Tippecanoe County. This program was shown at the July, 1998 Purdue Top Farmer Crop Workshop and the September, 1998 Prairie Farmer Farm Progress Show. The purpose of these demonstrations was to show prospective landowners, prospective tenants, and professional appraisers a way to estimate income potential of an ownership parcel.

Estimated yield and production cost by soil type

Purdue agronomists and NRCS staff have estimated crop yields for each soil type in Indiana. (These yield estimates may need to be updated, and possible differences considered for the same soil type in different counties.) Purdue staff annually estimate crop production costs for low, average, and high yielding soil types. The process could be computerized and budgets could be prepared for all Indiana soils.

Reported average yield by county

The Indiana Agricultural Statistics Service reports average yield for each county in May each year for the preceding year's crops. An expected trend yield could be calculated for each soil in each county. Each year, these trend yields could be adjusted by the same percentage change as the difference between the county expected and reported average yields.

Reported average Indiana November corn and soybean prices

The Indiana Agricultural Statistics Service reports average Indiana crop prices for each month. Prices for November^{1/} are used in calculating per acre corn and soybean income.

USDA corn and soybean loan price

USDA has determined corn and soybean loan prices for each Indiana county. These prices reflect crop price differences because of the location of the county. Therefore, the November state average prices for corn and soybeans could be adjusted by the price location differences in loan prices to obtain an estimate of November prices by county.

St Paul Farm Credit Bank interest rate

For each year, the Internal Revenue Service issues a listing of the average annual effective interest rates charged on new loans under the Farm Credit Bank system. These rates are used in computing the special use value of real property used as a farm for which an election is made under section 2032A of the Internal Revenue Code. Indiana is in the St Paul district. For 1999, the reported interest rate is .0821.

Weighted annual incomes and estimated land values

As shown in Table 1, the 4-year average annual income is \$80 and the estimated land value is \$971. As shown in Table 2, for the high yield land the average income is \$124 and the land value is \$1510.

Annual incomes could be weighted with income from the most recent year being weighted the most. One option would be a percentage weight of 40 - 30 - 20 - 10 with the most recent year at 40% and the most distant year at 10%. Using this criteria, the weighted average annual income is \$71.10 and the estimated average land value is \$866. A weighting of 33 - 27 - 22 - 18 with the most recent year at 33% and the most distant year at 18% produces a weighted average annual income of \$75.27 and an estimated average land value of \$917.

For high yield soil, the 40 - 30 - 20 - 10 optimal weights give an average income of \$113 and a land value of \$1379. The 33 - 27 - 22 - 18 weights give an average income of \$118 and a land value of \$1442.

This approach - discounting the potential agricultural income - to valuing farm land is reasonable so long as the income estimates and the discount rates are defensible. There is also logic to using a four year average with the most recent years being weighted higher, especially if the state were to go to annual assessments. So long as they stay with a four year assessment cycle it becomes more of a judgement call.

^{1/}Prices tend to increase throughout the year. November, a month close to the end of the harvest season was chosen. If prices later than November are chosen then a storage cost would also need to be included.

Income and land value estimates

As illustrated in Tables 1 and 2, income from a corn/soybean rotation on average and high yield soils is calculated for 1996-99.

State average yields for each soil are multiplied by November prices to obtain per acre sales.

Variable costs as found in the Purdue Crop Guide for average and high yield soils are subtracted to obtain per acre contribution margin from crops.

Corn contribution margin plus soybean contribution margin plus government payment is added and the sum is divided by 2 to get per acre total contribution margin.

Overhead costs from the Purdue Crop Guide for a corn/soybean farm are subtracted from the contribution margin to get per acre income.

Incomes for the four years are averaged.

The average income is divided by the St Paul interest rate to get estimated land value.

Table 1. Indiana Land Value Calculation
Based on an Income Approach, 1996-99
Average Yield Soil

	1996		1997		1998		1999	
	Corn	Beans	Corn	Beans	Corn	Beans	Corn	Beans
Yield ^{1/}	123	38	122	43.5	132	42	134.1	42.9
Price (November) ^{1/}	<u>\$2.69</u>	<u>\$6.90</u>	<u>\$2.60</u>	<u>\$6.88</u>	<u>\$2.06</u>	<u>\$5.49</u>	<u>\$2.04</u>	<u>\$5.40</u>
Sales	\$331	\$262	\$317	\$299	\$282	\$231	\$274	\$232
Less variable costs ^{2/}	<u>134</u>	<u>94</u>	<u>137</u>	<u>96</u>	<u>148</u>	<u>85</u>	<u>145</u>	<u>86</u>
Crops contribution margin	\$197	\$168	\$180	\$203	\$134	\$146	\$129	\$146
Plus government payment ^{3/}	<u>\$23</u>		<u>\$45</u>		<u>\$53</u>		<u>\$34</u>	
Total contribution margin	\$194		\$214		\$167		\$154	
Less overhead:								
Annual machinery ^{2/}	48		50		49		49	
Drying/handling	6		6		7		7	
Family/hired labor ^{2/}	37		37		37		37	
Real estate tax ^{3/}	<u>10</u>		<u>10</u>		<u>10</u>		<u>10</u>	
Equals:								
Income	\$93		\$111		\$64		\$51	

4-year average income = \$80

1999 St Paul interest rate^{4/} = .0821

Estimated land value = \$971

^{1/} State average yield, state average November price as reported by Indiana Agricultural Statistics Service.

^{2/} Costs are taken from annual Purdue Crop Guide, ID-166.

^{3/} Government payments and real estate tax are estimated by the author.

^{4/} Average annual effective interest rate on new loans under the Farm Credit Bank System, St Paul district.

Table 2.

Indiana Land Value Calculation
Based on an Income Approach, 1996-99
High Yield Soil

	1996		1997		1998		1999	
	Corn	Beans	Corn	Beans	Corn	Beans	Corn	Beans
Yield ^{1/}	151.3	46.8	49.9	53.6	169	51	165	52.8
Price (November) ^{1/}	<u>\$2.69</u>	<u>\$6.90</u>	<u>\$2.60</u>	<u>\$6.88</u>	<u>\$2.06</u>	<u>\$5.49</u>	<u>\$2.04</u>	<u>\$5.40</u>
Sales	\$407	\$323	\$390	\$369	\$348	\$280	\$337	\$285
Less variable costs ^{2/}	<u>153</u>	<u>103</u>	<u>157</u>	<u>106</u>	<u>170</u>	<u>91</u>	<u>167</u>	<u>92</u>
Crops contribution margin	\$254	\$220	\$233	\$263	\$178	\$189	\$170	\$193
Plus government payment ^{3/}	<u>\$29</u>		<u>\$56</u>		<u>\$64</u>		<u>\$42</u>	
Total contribution margin	\$252		\$276		\$216		\$202	
Less overhead:								
Annual machinery ^{2/}	53		55		54		54	
Drying/handling	7		7		8		8	
Family/hired labor ^{2/}	37		37		37		37	
Real estate tax ^{3/}	<u>14</u>		<u>14</u>		<u>14</u>		<u>14</u>	
Equals:								
Income	\$141		\$163		\$103		\$89	

4-year average income = \$124

1999 St Paul interest rate^{4/} = .0821

Estimated land value = \$1510

^{1/} State average yield, state average November price as reported by Indiana Agricultural Statistics Service.

^{2/} Costs are taken from annual Purdue Crop Guide, ID-166.

^{3/} Government payments and real estate tax are estimated by the author.

^{4/} Average annual effective interest rate on new loans under the Farm Credit Bank System, St Paul district.

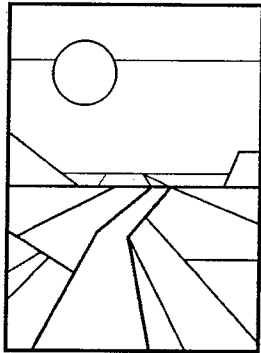
Table 2-18 - Updated for March 1, 2008

Source: Real Property Assessment Guidelines, Book 1, Chapter 2, Page 100

Year	NET INCOMES			MARKET VALUE IN USE		
	Cash Rent	Operating	Cap. Rate	Cash Rent	Operating	Average
2000	101	60	9.57%	1,055	627	841
2001	102	61	8.01%	1,273	762	1,017
2002	105	20	7.02%	1,496	285	890
2003	106	71	6.29%	1,685	1,129	1,407
2004	104	135	6.35%	1,638	2,126	1,882
2005	110	60	7.22%	1,524	831	1,177
Average Market Value In Use						
						1,200

Table 2-18 - Updated for March 1, 2008
Calculation for Net Income-Cash Rent Column

<u>Year</u>	Gross Cash <u>Rent</u>	Less Property Taxes	Net Cash <u>Rent</u>	Cap. Rate	Cash Rent Value
2000	112	-11	101	9.57%	1,055
2001	113	-11	102	8.01%	1,273
2002	116	-11	105	7.02%	1,496
2003	120	-14	106	6.29%	1,685
2004	122	-18	104	6.35%	1,638
2005	126	-16	110	7.22%	1,524



PURDUE AGRICULTURAL ECONOMICS REPORT

SEPTEMBER 2001

Indiana Farmland Values Continue to Increase

Craig L. Dobbins, Professor and Kim Cook, Research Associate

The 2001 Purdue Land Values Survey indicates that the value of an acre of average bare Indiana cropland was \$2,264 per acre in June 2001. This was \$91 more than the value reported in June 2000, a 4.2 percent increase. Cash rents increased from 1999 to 2000 on average land by a little less than 1 percent to \$113 per acre.

Statewide Land Values

For the *six months* ending in June 2001, the value of bare tillable land was reported to have increased 1.3 percent on top land, 1.0 percent on average land, and 1.2 percent on poor land (Table 1). While only a small upward change, these numbers indicate that the land values are holding strong in spite of continued low grain prices. Thirty-five percent of the survey respondents indicated that all classes of land (top, average, and poor) were the same or higher during the December 1, 2000 to June 1, 2001 period. Eleven percent of the respondents indicated that some or all classes of land fell in value and 49 percent indicated that land values

** In the 2000 survey, 32% of the respondents indicated land values were the same or increasing and 13% indicated that land values declined.*

*** Transitional land is land that is moving out of agriculture.*

remained unchanged during the December 1, 2000 to June 1, 2001 period. Compared to last year's survey, more respondents indicated that land values were increasing and fewer respondents indicated a decline.*

The statewide 12-month increase in average value from June 2000 to June 2001 was 4.2 percent (Table 1). Top-quality land (159 bushel corn yield rating) was estimated to have increased by \$87 per acre to \$2,802 (Table 1). Average land (129 bushel corn yield rating) was valued at \$2,264, an increase of \$91, while poor land (99 bushel corn yield rating) was estimated to be worth \$1,733 per acre, an increase of \$103.



The land value per bushel of corn yield rating also increased this year. For top-quality land, the value per bushel of yield was \$17.67, up by 2.3 percent. Average quality land value was \$17.53 per bushel, while the poor quality value was \$17.42 per bushel (Table 1). The percentage increases were 2.9 percent on average land and 4.3 percent on poor land. These per-bushel figures are \$0.39 higher than last year on top land, \$0.49 higher on average land, and \$0.72 higher on poor land.

The value of transition land** also exhibited an increase. The average value of transitional land in June 2001 was \$6,627, an increase of

1.5 percent from June 2000. For the six-month period from June 1, 2000 to December 1, 2000 transitional land values declined. However in the latter half of the year, December 1, 2000 to June 1, 2001, transitional land increased by 3.1 percent (Table 1). Due to the wide variation in estimates (from \$900 to \$35,000 in June, 2001), the median value may give a more meaningful picture than the arithmetic average. The median value of transitional land in June 2001 was \$5,250 per acre more than reported in June 2000.

Statewide Rents

Cash rents increased statewide from 2000 to 2001 by \$1 per acre on all classes of land (Table 2). The estimated cash rent on top land was \$141 per acre, \$113 per acre on average land, and \$87 per acre on poor land. Rent per bushel of estimated corn yield was \$0.89 on-

In This Issue

Indiana Farmland Values Continue to Increase	1
Changes in the Federal Estate Tax	7
Windpower: "Green" Source of Electricity or Just a Lot of Air?	8
Ag Economy 2002	9
The Value of Waiting to Invest in a Cooperative Hog Slaughter Plant	10
Crop and Revenue Insurance Alternatives	12

The highest valued top-quality land was in the Central area, \$3,135 per acre. The next highest values were in the West Central (\$2,823), Southwest (\$2,801), Northeast (\$2,711), and North (\$2,704) regions. Reported values for average quality land were \$2,631 in the Central area, \$2,329 in the West Central area, and around \$2,100 in the North, Northeast, and Southwest regions.

Land value per bushel of estimated average corn yield (land value divided by bushels) on top land in the Central region was \$19.06. For the West Central, North, and Northeast regions, land value per bushel of corn yield on top land ranged from \$17.15 to \$17.96. In the Southeast and Southwest, land value per bushel of corn yield on top land ranged from \$16.29 to \$16.92 (Table 1). The pattern in the land value per bushel for other land classes was similar.

Respondents were asked to estimate the value of rural home sites with no accessible gas line or city utilities and located on a black top or well-maintained gravel road. The median value for five-acre home sites ranged from \$5,000 to \$6,250 per acre (Table 3). Estimated per acre median values of the larger tracts (10 acres) ranged from \$4,000 to \$6,000 per acre.

Area Cash Rents

All regions except the Northeast reported increases in cash rents for the year (Table 2). The strongest increases in cash rents occurred in the Southeast, increasing 3.1 percent on poor land, 3.6 percent on average land, and 3.8 percent on top land. The Central region reported the next strongest increases, ranging from a 2.0 percent increase on poor land to a 2.7 percent increase on top land. The North, Northeast, and West Central regions each had a mixture of increases, decreases for no change in cash rents. For this group of regions the largest decrease was reported for poor land in the Northeast, a decline of 2.4 percent. The largest increase was for poor land in the West Central region, 2.1 percent.

Table 2. Average Estimated Indiana Cash Rent Per Acre, (Tillable, Bare Land) 2000 and 2001, Purdue Land Value Survey, June 2001

Area	Land Class	Corn bu/A	Rent/Acre		Change '00-'01 %	Rent/bu. of Corn		Rent as % of June Land Value	
			2000 \$/A	2001 \$/A		2000 \$/bu.	2001 \$/bu.	2000 %	2001 %
North	Top	158	140	142	1.4%	0.90	0.90	5.3	5.3
	Average	125	111	110	-0.9%	0.89	0.88	5.4	5.2
	Poor	92	81	82	1.2%	0.87	0.89	5.7	5.3
Northeast	Top	156	132	132	0.0%	0.85	0.85	5.0	4.9
	Average	128	105	104	-1.0%	0.83	0.81	5.1	4.9
	Poor	99	82	80	-2.4%	0.85	0.81	5.1	4.9
W. Central	Top	157	153	151	-1.3%	0.97	0.96	5.5	5.3
	Average	131	127	128	0.8%	0.97	0.97	5.5	5.5
	Poor	103	96	98	2.1%	0.94	0.95	5.7	5.6
Central	Top	165	150	154	2.7%	0.92	0.94	5.0	4.9
	Average	136	123	126	2.4%	0.92	0.93	4.9	4.8
	Poor	107	99	101	2.0%	0.94	0.94	4.9	4.7
Southwest	Top	166	136	140	2.9%	0.84	0.85	5.1	5.0
	Average	129	106	107	0.9%	0.84	0.83	5.4	5.0
	Poor	95	76	76	0.0%	0.82	0.80	5.7	5.2
Southeast	Top	149	105	109	3.8%	0.74	0.73	4.8	4.5
	Average	118	83	86	3.6%	0.72	0.73	4.6	4.3
	Poor	91	64	66	3.1%	0.72	0.72	4.5	4.2
Indiana	Top	159	140	141	0.7%	0.89	0.89	5.2	5.0
	Average	129	112	113	0.9%	0.88	0.88	5.2	5.0
	Poor	99	86	87	1.2%	0.88	0.87	5.3	5.0

Cash rents were again highest in the Central and West Central areas at \$154 and \$151 per acre, respectively, for top land. Cash rents per bushel for the West Central and Central regions ranged from \$0.93 to \$0.97. These were also the highest in the state. The next highest per-bushel rent was in the North, ranging from \$0.88 to \$0.90 per bushel. The per bushel rents in the Northeast and Southwest ranged from \$0.82 to \$0.85. The lowest per bushel cash rents were reported for

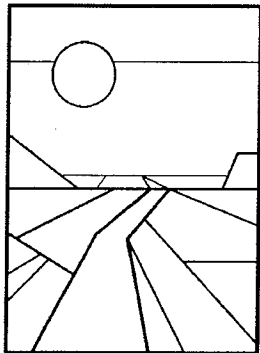
the Southeast, ranging from \$0.72 to \$0.73.

Land Market Activity

There are several factors that influence farmland prices. The supply of land on the market, the eagerness of buyers to make purchases, expectations about grain prices, rate of inflation, and interest rates are just a few examples. To assess the supply of land on the market, respondents were asked to indicate the amount of farmland on the market compared to a year

Table 3. Median Value of Five-Acre Home Sites and Home Sites of 10 Acres or More

Area	Median Value, \$ per acre									
	Under 5 Acres					10 Acres & Over				
	1997 \$/A	1998 \$/A	1999 \$/A	2000 \$/A	2001 \$/A	1997 \$/A	1998 \$/A	1999 \$/A	2000 \$/A	2001 \$/A
North	5,000	5,000	5,000	5,000	5,250	4,250	4,000	5,000	5,000	5,000
Northeast	4,250	5,000	5,000	5,000	5,000	4,000	4,000	4,000	4,500	4,500
West Central	5,000	5,000	5,000	5,000	5,000	5,000	4,700	4,000	5,000	5,000
Central	5,000	5,000	5,000	6,000	6,250	4,500	5,000	5,000	5,500	5,000
Southwest	4,250	5,000	5,000	5,000	6,000	5,000	4,500	5,000	5,000	6,000
Southeast	4,000	5,000	5,000	5,000	5,000	3,500	3,000	3,750	4,000	4,000



PURDUE AGRICULTURAL ECONOMICS REPORT

AUGUST 2003

Indiana Farmland Values & Cash Rents Continue to Increase

Craig L. Dobbins and Kim Cook

The June 2003 Purdue Land Values Survey found that on a state-wide basis bare Indiana cropland ranged in value from \$1,966 to \$3,035. These values are based on 323 surveys received from professionals that are knowledgeable of Indiana's farmland market. Poor land had an estimated value of \$1,966 per acre, average land had an estimated value of \$2,509 per acre, and top land had an estimated value of \$3,035 per acre (Table 1). For the 12-month period ending in June 2003, this was an increase of 5.2%, 5.3% and 4.9%, respectively for poor, average, and top land.

Part the difference in land values reflects productivity differences. As a measure of productivity, survey respondents were asked to estimate long-term corn yields. The average reported yield was 103, 134, and 163 bushels per acre, respectively for poor, average, and top quality land. The value per bushel for different land qualities was very similar. Poor land was the most expensive at \$19.07 per bushel. Top land had the

lowest value at \$18.59 per bushel and average land was \$18.79 per bushel.

The average value of transition land* increased this year, reversing the decline that occurred in last year's survey. The average value of transition land in June 2003 was \$6,936 per acre, an increase of 7.6% from June 2002. Due to the wide variation in estimates for transitional land, the median value** may give a more meaningful picture than the arithmetic average. The median value of transitional land in June 2003 was \$5,500 per acre.

Statewide Rents

Cash rents increased statewide from 2002 to 2003 by \$2 to \$4 per acre (Table 2). The estimated cash rent was \$147 per acre on top land, \$120 per acre on average land, and \$93 per acre on poor land. This was an increase in rental rates of 2.2% for poor land, 3.4% for average land, and 2.8% for top land. Rent per bushel of estimated corn yield was \$0.90 per bushel for all land classes. Cash rent as a percentage of value continued to decline. For top and average farmland, cash rent as a percentage of farmland value was 4.8%. For poor farmland, cash rent as a percentage of farmland was 4.7%. These values are the lowest achieved

in 27 year history of the Purdue Land Value Survey.

Area Land Values

Changes in the value of farmland in the six different geographic areas of Indiana (Figure 1) for December 2002 to June 2003 ranged from a 2.1% increase for poor land in the Central region to a 4.5% increase for average land in the Southwest region (Table 1). All regions of the state reported strong increases in farmland values for this six-month period. The strongest region was the Southwest with increases ranging from 3.4% to 4.5%.

For the year ending June 2003, the change in land values ranged from a decline of 8.4% for poor land in the

* Transitional land is land that is moving out of agriculture.

** The median value is the value in the middle of data that have been arranged in ascending or descending numerical order.

In This Issue

Indiana Farmland Values & Cash Rents Continue to Increase	1
Country of Origin Labeling	7
New Fence Law Provision	10
Investment in Downstream Publicly Traded Firms as a Vertical Integration Strategy to Increase Returns and Reduce Annual Volatility for Pork Producers	11
Needs Assessment: Quick and Easy	14
Indiana Weed Control Laws	15
Decision Time!	16

Area Cash Rents

All areas of the state reported increases in cash rent (Table 2). Only the Central and Southwest region reported a decline in cash rent. In both regions, the cash rent for poor land declined. The strongest increase in cash rent occurred in the Southeast region.

Cash rents are the highest in the Central and West Central regions. The cash rent for top land in both regions was \$158 per acre. Cash rents per bushel for the West Central and Central regions ranged from \$0.93 to \$0.98 per bushel. These per bushel rents are the highest in the state. The next highest per-bushel rent was in the North, ranging from \$0.88 to \$0.91 per bushel. Per bushel rents in the Northeast and Southwest ranged from \$0.82 to \$0.88. The lowest per bushel cash rents were \$0.74 to \$0.75, reported for the Southeast.

Important Factors in the Land Market

Several factors influence farmland prices. The supply of land on the market, the number of buyers interested in making a farmland purchase, and expectations about grain prices, interest rates, and the rate of inflation are just a few examples. To assess the supply of land on the market, respondents were asked to provide their opinion about the amount of farmland on the market now compared to a year earlier. The respondents were asked to indicate if there was more, less, or the same amount of land on the market now compared to a year earlier. Eight-six percent of the respondents indicated that the amount of land on the market at the current time was the same or less. These results are nearly the same as past years (Figure 2). Only 15% of the respondents indicated there was more farmland on the market. These results indicate the supply of land for sale remains limited.

To assess the amount of market activity, respondents were asked to provide their opinion of the number of farmland transfers in the past six months compared to a year earlier. The respondents could indicate that the number of transfers was up,

Table 2. Average estimated Indiana cash rent per acre, (tillable, bare land) 2002 and 2003, Purdue Land Value Survey, June 2003

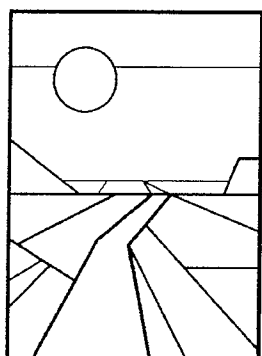
Area	Land Class	Corn bu/A	Rent/Acre		Change 02-03 %	Rent/bu. of Corn		Rent as % of June Land Value	
			2002 \$/A	2003 \$/A		2002 \$/bu.	2003 \$/bu.	2002 %	2003 %
North	Top	162	141	143	1.4%	0.88	0.88	5.3	4.7
	Average	130	113	115	1.8%	0.88	0.88	5.2	4.8
	Poor	100	88	91	3.4%	0.90	0.91	5.3	4.9
Northeast	Top	160	132	138	4.5%	0.82	0.86	4.9	4.8
	Average	128	104	106	1.9%	0.81	0.83	4.9	4.5
	Poor	97	81	82	1.2%	0.82	0.84	4.9	4.5
W. Central	Top	166	154	158	2.6%	0.96	0.95	5.3	5.2
	Average	138	131	134	2.3%	0.98	0.97	5.5	5.2
	Poor	108	103	106	2.9%	0.97	0.98	5.6	5.2
Central	Top	167	156	158	1.3%	0.94	0.95	4.9	4.7
	Average	138	128	129	0.8%	0.92	0.93	4.8	4.6
	Poor	109	103	102	-1.0%	0.94	0.94	4.7	4.3
Southwest	Top	167	145	147	1.4%	0.86	0.88	5.0	5.2
	Average	132	112	115	2.7%	0.85	0.87	5.0	5.5
	Poor	96	82	79	-3.7%	0.83	0.82	5.2	6.0
Southeast	Top	153	111	114	2.7%	0.73	0.75	4.5	4.2
	Average	124	88	93	5.7%	0.73	0.75	4.3	4.0
	Poor	96	66	71	7.6%	0.73	0.74	4.2	3.7
Indiana	Top	163	143	147	2.8%	0.88	0.90	5.0	4.8
	Average	134	116	120	3.4%	0.88	0.90	5.0	4.8
	Poor	103	91	93	2.2%	0.89	0.90	5.0	4.7

down, or the same as a year earlier. Again, the largest number of respondents indicated the number of farmland transfers was the same as a year ago (Figure 3). However in this case, there has been a steady rise in the number of respondents indicating an increase in the number of transfers and a steady decline in the number of respondents indicating a decline. These changes indicate that there has been some increase in the number of farmland transfers.

Respondents were asked to provide their perceptions of changes in the buyers of farmland by indicating if purchases by farmers, rural residents, nonfarm investors, or pension funds had increased, decreased, or remained the same when compared to a year earlier. Demand from farmers and nonfarm investors have shown the largest changes. This year, just over 43% of the respondents indicated that there was an increased demand from farmers (Figure 4). This

Table 3. Median value of five-acre home sites and home sites of ten acres or more

Area	Median value, \$ per acre							
	5 Acres or less for home site				10 Acres & over for subdivision			
	2000 \$/A	2001 \$/A	2002 \$/A	2003 \$/A	2000 \$/A	2001 \$/A	2002 \$/A	2003 \$/A
North	5,000	5,250	6,000	6,000	5,000	5,000	5,000	5,000
Northeast	5,000	5,000	5,000	6,000	4,500	4,500	4,500	5,000
West Central	5,000	5,000	5,800	6,000	5,000	5,000	5,000	5,000
Central	6,000	6,250	7,000	8,500	5,500	5,000	5,750	7,500
Southwest	5,000	6,000	5,000	5,000	5,000	6,000	5,000	5,000
Southeast	5,000	5,000	5,500	6,000	4,000	4,000	5,000	4,750



PURDUE AGRICULTURAL ECONOMICS REPORT

AUGUST 2005

Indiana Farmland Values & Cash Rents Jump Upward

Craig L. Dobbins and Kim Cook

Statewide Land Values

The June 2005 Purdue Land Values Survey found that on a state-wide basis bare Indiana cropland ranged in value from \$2,367 per acre for poor land, to \$3,556 per acre for top land (Table 1). Average bare Indiana cropland had an estimated value of \$2,945 per acre. For the 12-month period ending in June 2005, this was an increase of 11.1%, 9.4% and 8.5%, respectively for poor, average, and top land. Increases this large have not occurred since 1996-1997 when the Purdue Land Values Survey reported a state wide increase of 12% to 15%.

Part of the difference in land values reflects productivity differences. As a measure of productivity, survey respondents provide an estimate of long-term corn yields. The average

reported yield was 108, 139, and 169 bushels per acre, respectively for poor, average, and top land. The value per bushel for different land qualities was very similar, ranging from \$21.08 to \$22.01 per bushel.

The average value of transitional land, land moving out of agriculture, increased 8.5% this year. The average value of transitional land in June 2005 was \$8,207 per acre. Due to the wide variation in estimates for transitional land, the median value* may give a more meaningful picture than the arithmetic average. The median value of transitional land in June 2005 was \$7,000 per acre.

Statewide Rents

Cash rents increased statewide \$3 to \$4 per acre (Table 2), continuing the steady increase of the past several years. The estimated cash rent was \$154 per acre on top land, \$126 per acre on average land, and \$99 per acre on poor land. This was an increase in rental rates of 3.1% for poor land, 3.3% for

average land, and 2.7% for top land. State wide, rent per bushel of estimated corn yield ranged from \$0.91 to \$0.92 per bushel.

Cash rent as a percentage of value continued to decline. For top and average farmland, cash rent as a percentage of farmland value was 4.3%. For poor farmland, cash rent as a percentage of farmland value was 4.2%. These values are the lowest reported in the 31 year history of the Purdue Land Value Survey.

Area Land Values

Survey responses were organized into six geographic regions of Indiana (Figure 1). In past years, there have been definite geographic differences in land value changes. This year there is only one notable difference – the change in land values in the Southeast was not as large as in other areas of the state (Table 1). The highest valued land continues to be in the Central region followed by the West Central, North, Northeast, Southwest, and Southeast.

* The median is the middle observation in data that have been arranged in ascending or descending numerical order.

acre (Table 3). Estimated per acre median values of the larger tracts (10 acres) ranged from \$5,250 to \$8,500 per acre.

Area Cash Rents

All areas of the state reported an increase in cash rent for all land qualities (Table 2). The largest percentage increases in cash rent occurred in the Southern regions of the state.

Cash rents are the highest in the Central and West Central regions. Across all three land qualities, cash rents in these two regions were very similar. When looking at the cash rent per bushel for the West Central and Central regions, these values ranged from \$0.97 to \$1.03 per bushel. These per bushel rents are the highest in the state. The next highest per-bushel rent was in the North and Southwest, ranging from \$0.88 to \$0.91. Per bushel rents in the Northeast ranged from \$0.84 to \$0.86. The lowest per bushel cash rents were \$0.74 to \$0.77, reported for the Southeast.

Farmland Supply & Demand

The supply of land on the market and the number of interested buyers and their expectations has an important influence on farmland prices. To assess the supply of land on the market, respondents were asked to provide their opinion of the amount of farmland on the market now compared to a year earlier. The respondents indicated either more, the same, or less. Only 16% of the 2005 respondents indicated more land was on the market now compared to year-ago levels (Figure 2). The

Table 2. Average estimated Indiana cash rent per acre, (tillable, bare land) 2004 and 2005, Purdue Land Value Survey, June 2005

Area	Land Class	Corn bu/A	Rent/Acre		Change '04-'05 %	Rent/bu. of Corn		Rent as % of June Land Value	
			2004 \$/A	2005 \$/A		2004 \$/bu.	2005 \$/bu.	2004 %	2005 %
North	Top	173	149	153	2.7%	0.89	0.88	4.4	4.1
	Average	140	122	125	2.5%	0.89	0.89	4.5	4.2
	Poor	107	93	97	4.3%	0.88	0.90	4.5	4.1
Northeast	Top	165	138	141	2.2%	0.84	0.86	4.3	4.1
	Average	134	107	111	3.7%	0.81	0.83	4.1	3.9
	Poor	104	85	87	2.4%	0.85	0.84	4.1	3.7
W. Central	Top	168	162	166	2.5%	0.98	0.99	4.8	4.5
	Average	140	137	140	2.2%	0.99	1.00	4.9	4.5
	Poor	108	109	112	2.8%	1.02	1.03	4.9	4.6
Central	Top	172	162	167	3.1%	0.95	0.97	4.6	4.2
	Average	142	133	138	3.8%	0.94	0.97	4.4	4.1
	Poor	113	108	112	3.7%	0.97	0.99	4.3	4.0
Southwest	Top	170	146	155	6.2%	0.90	0.91	5.0	5.0
	Average	138	116	123	6.0%	0.89	0.89	5.2	4.9
	Poor	106	89	93	4.5%	0.89	0.88	5.6	5.0
Southeast	Top	161	118	123	4.2%	0.77	0.77	4.1	4.2
	Average	133	94	99	5.3%	0.76	0.74	3.9	4.0
	Poor	103	72	77	6.9%	0.74	0.74	3.7	3.8
Indiana	Top	169	150	154	2.7%	0.91	0.91	4.6	4.3
	Average	139	122	126	3.3%	0.90	0.91	4.5	4.3
	Poor	108	96	99	3.1%	0.92	0.92	4.5	4.2

remaining 84% of the respondents indicated the amount of land on the market at the current time was the same or less than a year ago. These results indicate the quantity of land for sale remains limited.

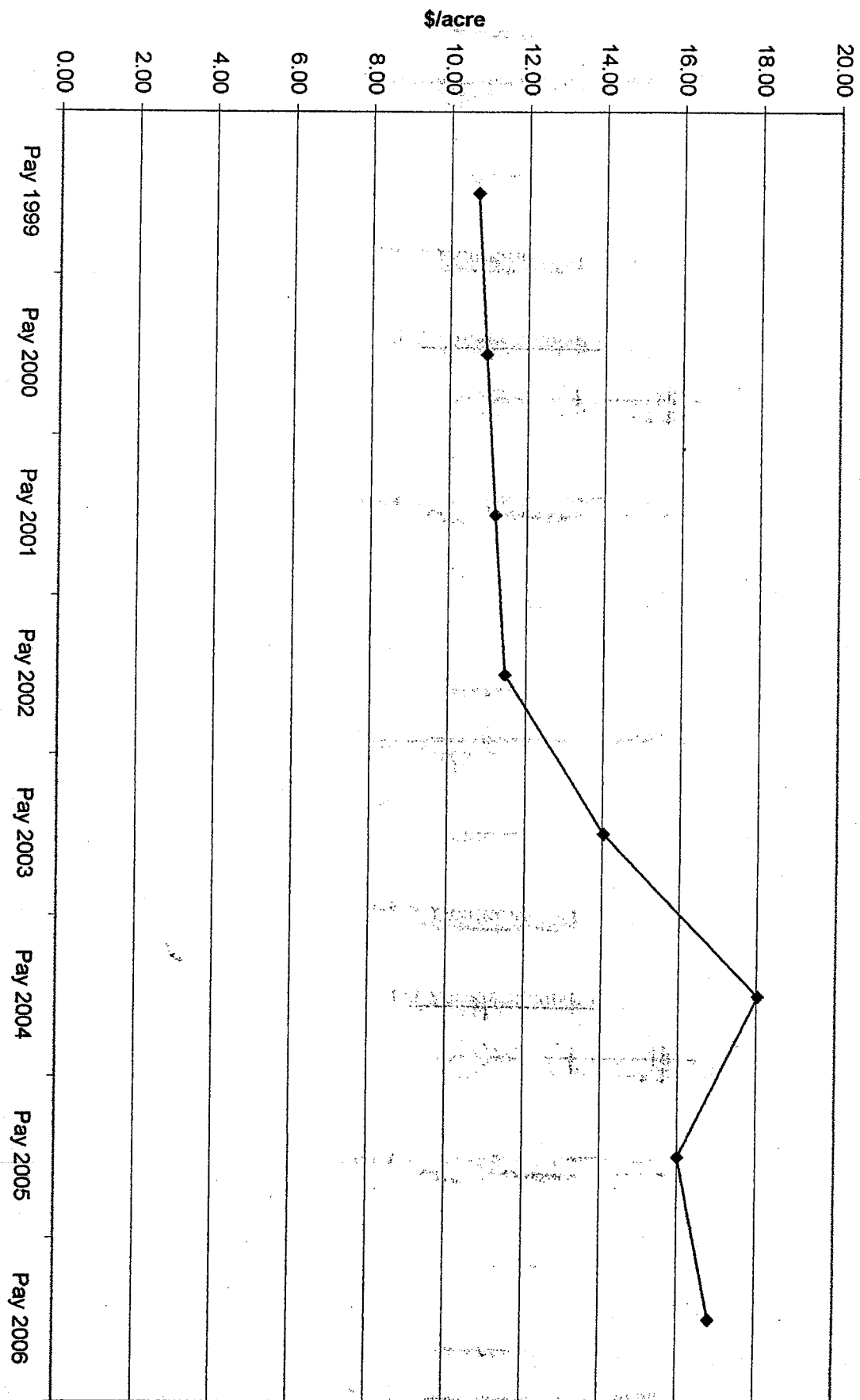
Respondents were also asked to indicate if interest in a farmland purchase by

farmers, rural residents, or nonfarm investors had increased, decreased, or remained the same compared to a year earlier. A total of 55% of the respondents indicated increased farmer interest (Figure 3). Forty-one percent of the respondents indicated

Table 3. Median value of five-acre and ten-acre home sites

Area	Median value, \$ per acre							
	5 Acres or less for home site				10 Acres & over for subdivision			
	2002 \$/A	2003 \$/A	2004 \$/A	2005 \$/A	2002 \$/A	2003 \$/A	2004 \$/A	2005 \$/A
North	6,000	6,000	6,000	7,250	5,000	5,000	5,000	6,000
Northeast	5,000	6,000	6,000	6,500	4,500	5,000	5,000	5,000
West Central	5,800	6,000	6,000	6,000	5,000	5,000	5,000	6,000
Central	7,000	8,500	8,000	10,000	5,750	7,500	7,900	8,500
Southwest	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,250
Southeast	5,500	6,000	6,000	7,000	5,000	4,750	5,000	6,000

Average Net Tax Bill/Acre of Farmland



Average net Tax bill/acre of farmland

Pay 1999	10.70
Pay 2000	10.94
Pay 2001	11.19
Pay 2002	11.46
Pay 2003	14.03
Pay 2004	18.03
Pay 2005	16.00
Pay 2006	16.82

Indiana		<u>Real Estate Loans</u>	<u>Operating Loans</u>	<u>Avg.</u>
2000	Jan.	8.89	9.78	
	April	9.21	10.43	
	July	9.18	10.17	
	Oct.	8.9	9.92	
	Average	9.05	10.08	9.57
2001	Jan.	8.23	9.16	
	April	7.91	8.60	
	July	7.47	8.01	
	Oct.	7.21	7.41	
	Average	7.71	8.30	8.01
2002	Jan.	7.22	7.33	
	April	7.08	7.28	
	July	6.84	7.21	
	Oct.	6.51	6.7	
	Average	6.91	7.13	7.02
2003	Jan.	6.36	6.61	
	April	6.04	6.43	
	July	6.12	6.41	
	Oct.	6.05	6.26	
	Average	6.14	6.43	6.29
2004	Jan.	5.87	6.22	
	April	6.23	6.39	
	July	6.28	6.57	
	Oct.	6.39	6.81	
	Average	6.19	6.50	6.35
2005	Jan.	6.63	7.07	
	April	6.74	7.33	
	July	7.02	7.68	
	Oct.	7.25	8.02	
	Average	6.91	7.53	7.22

Source: Federal Reserve Bank of Chicago.
AgLetter (a quarterly newsletter)

Letter

FARMLAND VALUES AND CREDIT CONDITIONS

Summary

The 2003 annual increase of 7 percent in the value of "good" agricultural land for the Seventh Federal Reserve District matched the rise of last year, the biggest increase since 1997. Based on a survey of 284 agricultural bankers as of January 1, 2004, the quarterly gain in farmland values for the District was once again 2 percent, on average. Over half the bankers expected farmland values to increase over the next three months and very few expected farmland values to fall.

Agricultural credit conditions improved noticeably from both last quarter and a year ago, according to District bankers. Loan repayment rates actually rose relative to a year earlier, which had not happened since 1997. Both the demand for loans and renewal or extensions in the fourth quarter were essentially the same as the level of a year ago. Only 10 percent of banks required increased collateral when compared with the fourth quarter of last year. There was continued improvement in the availability of funds, though the pace was the lowest of the past year. Interest rates on agricultural loans moved down again, but real estate loan rates were not quite as low as six

months ago. Loan-to-deposit ratios fell to the lowest level since 1999. Overall, these improvements brightened the District's agricultural credit conditions, pushing back concerns about the financial situation in the agricultural economy for at least a quarter.

Farmland values

Even as the value of "good" agricultural land increased in all the states of the District last year, not all states experienced increases in the fourth quarter of 2003 (see table and map below). From October 1, 2003, to January 1, 2004, Illinois led the District with a 5 percent increase in farmland values, followed closely by Iowa at 4 percent. The change in farmland values for Indiana and Wisconsin trailed the other states with a 1 percent decrease and no change (quarter-to-quarter), respectively. While low prices in the dairy industry have hurt Wisconsin land values recently, there does not seem to be an easy explanation for Indiana's down quarter.

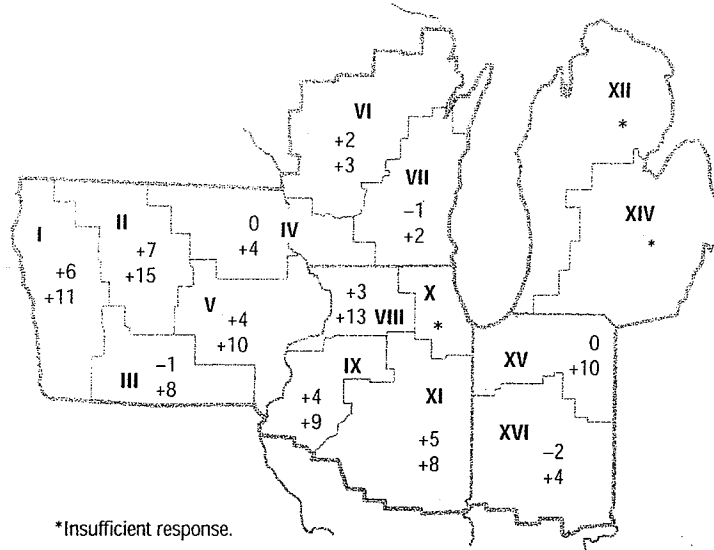
Last year's District farmland values rose on average 7 percent, equaling the results of 2002 (see chart 1). State increases ranged from a 10 percent gain in Iowa down to 3 percent gains in Michigan and Wisconsin, where the annual change was the smallest in a decade. Fifty-two

Percent change in dollar value of "good" farmland

Top: October 1, 2003 to January 1, 2004

Bottom: January 1, 2003 to January 1, 2004

	October 1, 2003 to January 1, 2004	January 1, 2003 to January 1, 2004
Illinois	+5	+9
Indiana	-1	+6
Iowa	+4	+10
Michigan	+3	+3
Wisconsin	0	+3
Seventh District	+2	+7



Credit conditions at Seventh District agricultural banks

	Loan demand	Fund availability	Loan repayment rates	Average loan-to-deposit ratio ¹	Interest rates on farm loans		
	(index) ²	(index) ²	(index) ²	(percent)	Operating loans ¹	Feeder cattle ¹	Real estate ¹
2000							
Jan-Mar	121	95	77	72.9	9.78	9.72	8.89
Apr-June	109	76	72	75.5	10.43	10.14	9.21
July-Sept	106	82	77	76.9	10.17	10.14	9.18
Oct-Dec	105	92	81	74.9	9.92	9.90	8.90
2001							
Jan-Mar	118	101	67	75.0	9.16	9.17	8.23
Apr-June	106	109	73	75.1	8.60	8.58	7.91
July-Sept	91	127	86	74.9	8.01	8.07	7.47
Oct-Dec	101	129	75	72.8	7.41	7.51	7.21
2002							
Jan-Mar	108	118	66	72.7	7.33	7.48	7.22
Apr-June	105	120	71	75.1	7.28	7.35	7.08
July-Sept	99	124	76	75.7	7.21	7.26	6.84
Oct-Dec	101	130	88	73.2	6.70	6.78	6.51
2003							
Jan-Mar	109	130	79	72.4	6.61	6.75	6.36
Apr-June	99	138	84	72.7	6.43	6.52	6.04
July-Sept	95	129	86	72.9	6.41	6.47	6.12
Oct-Dec	97	127	104	71.8	6.26	6.35	6.05

¹At end of period.

²Bankers responded to each item by indicating whether conditions during the current quarter were higher, lower, or the same as in the year-earlier period. The index numbers are computed by subtracting the percent of bankers that responded "lower" from the percent that responded "higher" and adding 100.

Looking forward

Respondents foresee increased loan volume in the year ahead, particularly for farm machinery loans. Comparing the first quarter of 2004 with the first quarter last year, 27 percent of the bankers indicated that they projected higher non-real estate loan volume, while 15 percent expected lower volume. More respondents expected increases in operating loans (35 percent) and Farm Service Agency (FSA) guaranteed loans (22 percent), rather than decreases (about 10 percent for both). Just over a quarter of the bankers looked for higher real estate loan volume, more than the 11 percent that looked for lower volume. Lower expected volumes for both feeder cattle and dairy loans reflected the impact of an incident of mad cow disease and diminished prices. Grain storage construction loans were also expected to drop in volume, even though storing crops has proven profitable this season. The biggest change in expectations was that farm machinery loan volume would rise, except in Wisconsin, during January, February, and March compared to a year ago.

Bankers anticipated that farmers would boost capital expenditures in the year ahead, though about half of the respondents foresaw no change in the level of capital expenditures from last year. The brightest prospects were for machinery and equipment with 45 percent of the bankers looking for higher spending, as well as 37 percent for higher spending on trucks and automobiles. For buildings and facilities, only 18 percent were seeing higher expendi-

tures and 19 percent lower levels. Expenditures on land purchases or improvements were projected by 27 percent to be higher than last year and by 14 percent to be lower.

There continued to be expectations of expanded use of biotechnology, as 36 percent of respondents for corn and 28 percent for soybeans expected the number of acres planted with genetically modified organisms (GMOs) to increase this year. Only 5 percent of the bankers anticipated a decline in the use of GMO seed. There was no change in the willingness of banks to finance GMO seed purchases (only 3 percent were not willing).

David B. Oppedahl, *Economist*

AgLetter (ISSN 1080-8639) is published quarterly by the Research Department of the Federal Reserve Bank of Chicago. It is prepared by David B. Oppedahl, economist, and members of the Bank's Research Department. The information used in the preparation of this publication is obtained from sources considered reliable, but its use does not constitute an endorsement of its accuracy or intent by the Federal Reserve Bank of Chicago.

© 2004 Federal Reserve Bank of Chicago
AgLetter articles may be reproduced in whole or in part, provided the articles are not reproduced or distributed for commercial gain and provided the source is appropriately credited. Prior written permission must be obtained for any other reproduction, distribution, republication, or creation of derivative works of *AgLetter* articles. To request permission, please contact Helen Koshy, senior editor, at 312-322-5830 or email Helen.Koshy@chi.frb.org. *AgLetter* and other Bank publications are available on the Bank's website at www.chicagofed.org.

Letter

FARMLAND VALUES AND CREDIT CONDITIONS

Summary

The 2006 annual increase in farmland values was 9 percent for the Seventh Federal Reserve District, extending the strongest stretch of gains since the 1970s. Based on 213 survey responses from agricultural bankers, the quarterly rise in the value of "good" agricultural land was 5 percent in the fourth quarter of 2006. Almost 50 percent of the respondents expected farmland values to increase, as well as to remain stable, in the first quarter of 2007.

Agricultural credit conditions in the District improved from a year ago, reversing some of the slippage in recent quarters. Indexes of non-real-estate farm loan repayment rates and funds availability demonstrated stronger activity than both the last quarter of 2005 and the third quarter of 2006, as did loan renewals and extensions. Loan demand in the fourth quarter of 2006 was below the level of the prior quarter, but above that of the fourth quarter of 2005. Agricultural interest rates were stable for the third consecutive quarter. Loan-to-deposit ratios averaged 76.6 percent for the fourth quarter of 2006.

Farmland values

The value of "good" agricultural land in the District increased 9 percent in 2006, just missing a third consecutive double-digit annual gain. Annual farmland values adjusted for inflation have risen at least 5 percent for five

years in a row (see chart on next page). Surging ahead of the other District states, Iowa posted a 13 percent annual increase because of a fourth quarter gain of 7 percent (see table and map below). Indiana and Wisconsin farmland value increases slowed to 6 percent and 10 percent for the year, respectively, while the Illinois and Michigan annual increases were unchanged from the third quarter of 2006. All District states had higher gains in farmland values in the fourth quarter compared with those of the third quarter.

This shift to faster growth in farmland values during the last half of 2006 coincided with significantly higher corn and soybean prices, which boosted net farm income. Cash corn prices in central Illinois increased to \$3.53 per bushel in December, 89 percent higher than those in December 2005 and the highest in over a decade. December cash soybean prices in central Illinois rose to \$6.40 per bushel, 12 percent above the previous year's prices. Based on U.S. Department of Agriculture data for 2006, District corn production slipped 1.4 percent from that of 2005, falling to 5.40 billion bushels, whereas soybean production rose 4.7 percent to 1.44 billion bushels, a new record. In 2006, District states produced 51.3 percent of U.S. corn output and 45.1 percent of national soybean output, so the District reaped much of the benefits from higher prices.

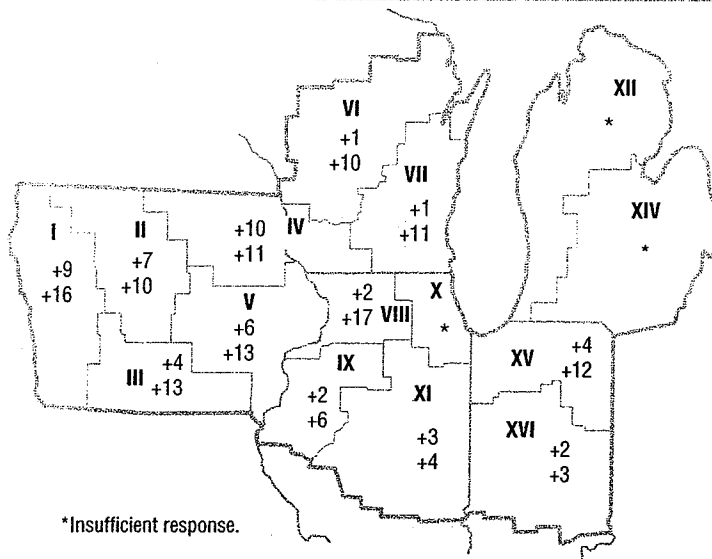
Moreover, District states had the capacity to produce 55 percent of U.S. ethanol output in 2006, calculated using data from the Renewable Fuels Association. U.S.

Percent change in dollar value of "good" farmland

Top: October 1, 2006 to January 1, 2007

Bottom: January 1, 2006 to January 1, 2007

	October 1, 2006 to January 1, 2007	January 1, 2006 to January 1, 2007
Illinois	+2	+6
Indiana	+2	+6
Iowa	+7	+13
Michigan	+6	+5
Wisconsin	+2	+10
Seventh District	+5	+9



Credit conditions at Seventh District agricultural banks

	Loan demand	Funds availability	Loan repayment rates	Average loan-to-deposit ratio	Interest rates on farm loans		
					Operating loans ^a	Feeder cattle ^a	Real estate ^a
	(index) ^b	(index) ^b	(index) ^b	(percent)	(percent)	(percent)	(percent)
2004							
Jan-Mar	116	131	128	73.2	6.22	6.28	5.87
Apr-June	101	117	118	73.7	6.39	6.46	6.23
July-Sept	109	111	112	74.5	6.57	6.61	6.28
Oct-Dec	109	121	127	74.1	6.81	6.80	6.39
2005							
Jan-Mar	117	112	116	74.4	7.07	7.08	6.63
Apr-June	119	101	103	76.3	7.33	7.30	6.74
July-Sept	115	97	87	76.9	7.68	7.65	7.02
Oct-Dec	120	110	90	75.8	8.02	7.95	7.25
2006							
Jan-Mar	131	102	87	76.7	8.30	8.27	7.48
Apr-June	115	101	85	78.0	8.76	8.66	7.85
July-Sept	124	95	87	79.1	8.73	8.70	7.82
Oct-Dec	109	116	130	76.6	8.71	8.70	7.74

Note: Historical data on Seventh District agricultural credit conditions is available for download from the *AgLetter* homepage, www.chicagofed.org/economic_research_and_data/ag_letter.cfm.

^aAt end of period.

^bBankers responded to each item by indicating whether conditions during the current quarter were higher, lower, or the same as in the year-earlier period. The index numbers are computed by subtracting the percent of bankers that responded "lower" from the percent that responded "higher" and adding 100.

in Illinois and Iowa offset decreased demand in Indiana, Michigan, and Wisconsin for the fourth quarter of 2006.

Funds availability increased across the District from a year ago, after a slight dip in the third quarter. The index of funds availability reached 116, the highest value in the last two years, as 26 percent of the respondents reported higher funds availability and 9 percent lower. Collateral requirements tightened a bit at District banks, with 8 percent raising and one percent lowering the amount of collateral required during the October-December period in 2006. Fewer bankers than a year ago indicated tightening credit standards for agricultural loans in the fourth quarter of 2006 versus the fourth quarter of 2005. Just 1 percent of District customers with operating credit were not likely to qualify for new credit in 2007, according to respondents, which was half the level of a year ago.

Interest rates for agricultural loans haven't increased in three quarters. As of January 1, 2007, the District averages for interest rates were 8.71 percent on new operating loans and 7.74 percent on farm real estate loans. Interest rates on agricultural loans were lowest in Illinois (8.41 percent on operating loans and 7.62 percent on farm mortgages). Interest rates on operating loans were highest in Iowa (8.93 percent), and Wisconsin had the highest farm real estate loan rates (8.15 percent).

Looking forward

For January, February, and March of 2007, 35 percent of the respondents expected higher non-real-estate loan volumes, compared with 18 percent expecting lower volumes. Higher loan volumes were anticipated for operating, farm machinery, and grain storage construction loans. Lower volumes were anticipated for feeder cattle loans,

dairy loans, and loans guaranteed by the Farm Service Agency. With 27 percent of the bankers expecting higher real estate loan volumes in the first quarter of 2007 and 14 percent expecting lower volumes, the volume of mortgages on agricultural real estate will likely expand, mainly in Illinois, Indiana, and Iowa.

Finally, the surveyed bankers thought capital expenditures by farmers would increase in 2007. About 70 percent of the bankers anticipated increased purchases of machinery and equipment in 2007. Around 40 percent expected higher spending on land purchases, improvements, buildings, and facilities in 2007 than in 2006. With less than 10 percent expecting lower capital expenditures of each kind, the survey respondents indicated that capital spending by farmers will pick up in 2007.

David B. Oppedahl, *Business economist*

AgLetter (ISSN 1080-8639) is published quarterly by the Research Department of the Federal Reserve Bank of Chicago. It is prepared by David B. Oppedahl, business economist, and members of the Bank's Research Department. The information used in the preparation of this publication is obtained from sources considered reliable, but its use does not constitute an endorsement of its accuracy or intent by the Federal Reserve Bank of Chicago.

© 2007 Federal Reserve Bank of Chicago
AgLetter articles may be reproduced in whole or in part, provided the articles are not reproduced or distributed for commercial gain and provided the source is appropriately credited. Prior written permission must be obtained for any other reproduction, distribution, republication, or creation of derivative works of *AgLetter* articles. To request permission, please contact Helen Koshy, senior editor, at 312-322-5830 or email Helen.Koshy@chi.frb.org. *AgLetter* and other Bank publications are available on the Bank's website at www.chicagofed.org.

Income Approach: November, Annual Average, & Marketing Year Average Prices

Line #	Column	A		B		C		D		E		F		G		H		I		J		K		L		Source or Formula:
		2000		2001		2002		2003		2004		2005														
1	Yield	Corn 146	Beans 46	Corn 156	Beans 49	Corn 121	Beans 41.5	Corn 146	Beans 38	Corn 168	Beans 51.5	Corn 154	Beans 49	IASS - Crop Summary												
2	Price - November	1.83	4.57	1.83	4.18	2.41	5.53	2.25	7.25	1.81	5.22	1.71	5.61	IASS - Crop Prices												
3	Price - Annual Avg.	1.91	4.85	1.94	4.54	2.21	5.06	2.36	6.26	2.49	7.63	1.97	6.03	DLGF Calculation												
4	Price - Market Avg.	1.88	4.71	1.90	4.61	1.98	4.42	2.41	5.55	2.53	7.67	1.99	5.66	IASS - Crop Prices												
5	GI - November	267.18	210.22	285.48	204.82	291.61	229.50	328.50	275.50	304.08	268.83	263.34	274.89	Line 1 times Line 2												
6	GI -Annual Avg.	278.86	223.10	302.64	222.46	267.41	209.99	344.56	237.88	418.32	392.95	303.38	295.47	Line 1 times Line 3												
7	GI -Market Avg.	274.48	216.66	296.40	225.89	239.58	183.43	351.86	210.90	425.04	395.01	306.46	277.34	Line 1 times Line 4												
8	AA v Nov	11.68	12.88	17.16	17.64	-24.20	-19.51	16.06	-37.62	114.24	124.12	40.04	20.58	Line 6 minus Line 5												
9	MA v Nov	7.30	6.44	10.92	21.07	-52.03	-46.07	23.36	-64.60	120.96	126.18	43.12	2.45	Line 7 minus Line 5												
10	NRTL - November	54		50		44		82		54		42		DLGF Calculation												
11	NRTL - Annual Avg	66		68		22		71		173		72		Line 10 + or - Avg. Line 8												
12	NRTL - Market Avg	61		66		-5		61		178		65		Line 10 + or - Avg. Line 9												
13	NRTL Average	60		61		20		71		135		60		Average Lines 10, 11, & 12												
14	FRBC RE Rate	0.0905		0.0771		0.0691		0.0614		0.0619		0.0691		Fed. Res. Bank of Chicago												
15	FRBC OP Rate	0.1008		0.0830		0.0713		0.0643		0.0650		0.0753		Fed. Res. Bank of Chicago												
16	Avg. FRBC Rate	0.0957		0.0801		0.0702		0.0629		0.0635		0.0722		Average Lines 14 & 15												
17	Operating Market Value In Use	627		762		271		1,129		2,126		831		Line 13 / Line 16												

NRTL = Net Return To Land

FRBC = Federal Reserve Bank of Chicago

Doster/Huie - Table 1
Updated - October, 2007

Doster/Huie -Table 1														Source
Updated - October, 2007														
Line #	A 2000	B 2000	C 2001	D 2001	E 2002	F 2002	G 2003	H 2003	I 2004	J 2004	K 2005	L 2005		
1	Yield	Corn 146	Beans 46	Corn 156	Beans 49	Corn 121	Beans 41.5	Corn 146	Beans 38	Corn 168	Beans 51.5	Corn 154	Beans 49	IASS
2	Price - Nov.	1.83	4.57	1.83	4.18	2.41	5.53	2.25	7.25	1.81	5.22	1.71	5.61	IASS
3	Sales	267	210	285	205	292	229	329	276	304	269	263	275	Line 1 X Line 2
4	Less Variable Costs	139	89	155	93	147	97	154	99	171	106	184	114	Crop Guide
5	Contribution Margin	128	121	130	112	145	132	175	177	133	163	79	161	Line 3 - Line 4
6	Plus Gov't Pymt.	73		72		25		33		41		71		IASS
7	Total Contribution Margin	161		157		151		192		168		156		Lines 5 + 6 / 2
Less Overhead:														
8	Annual Machinery	52		52		52		52		52		52		Crop Guide
9	Drying/Handling	7		7		7		7		7		7		Crop Guide
10	Family/Hired Labor	37		37		37		37		37		39		Crop Guide
11	Real Estate Tax	11		11		11		14		18		16		DLGF Study
12	Net ReturnTo Land - Nov.	54		50		44		82		54		42		Line 7 - 8,9,10, 11

Indiana Corn Yields:

1975	98
1976	110
1977	102
1978	108
1979	112
1980	96
1981	108
1982	126
1983	73
1984	117
1985	123
1986	122
1987	135
1988	83
1989	133
1990	129
1991	92
1992	147
1993	132
1994	144
1995	113
1996	123
1997	122
1998	137
1999	132

2000	146
2001	156
2002	121
2003	146
2004	168
2005	154

2006**IASS has not published yet.****Indiana Soybean Yields:**

1975	33.5
1976	34
1977	37
1978	34.5
1979	36
1980	36
1981	33
1982	38.5
1983	31
1984	34.5
1985	41.5
1986	37
1987	40
1988	27.5
1989	36.5
1990	41
1991	39
1992	43
1993	46
1994	47
1995	39.5
1996	38
1997	43.5
1998	42
1999	39

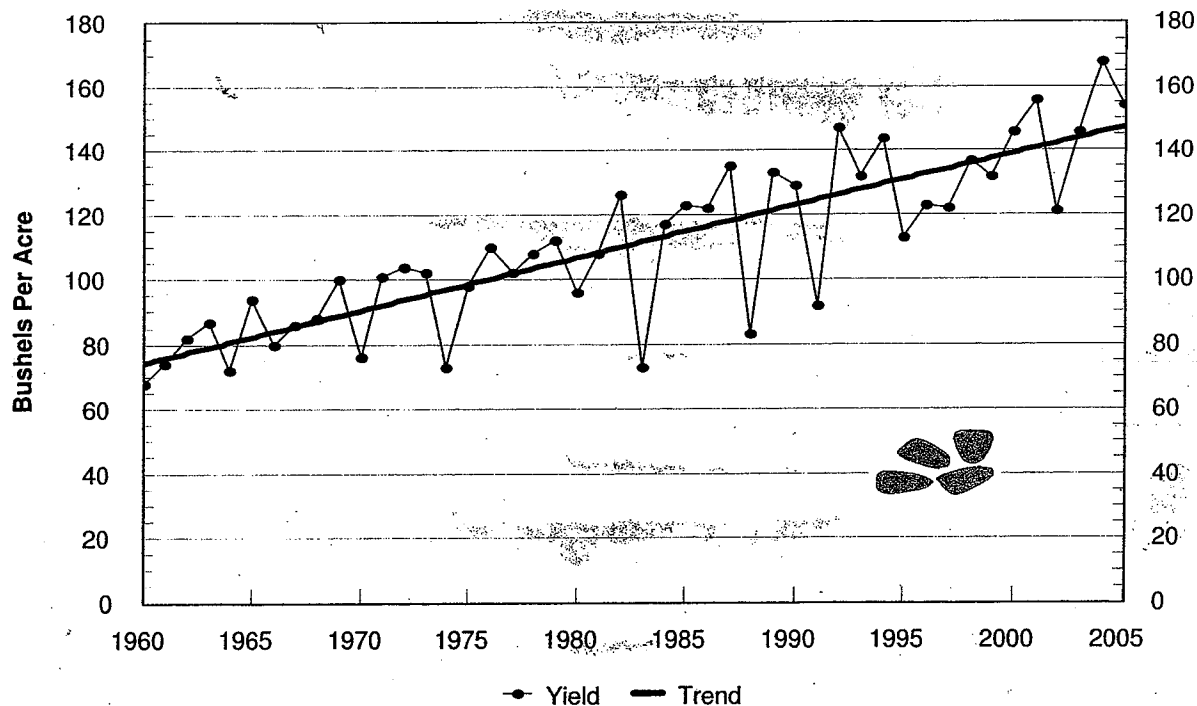
2000	46
2001	49
2002	41.5
2003	38
2004	51.5
2005	49

CROP SUMMARY

CORN FORECAST AND FINAL YIELD INDIANA, 1982-2005

Year	August Forecast	September Forecast	October Forecast	November Forecast	Final Yield Per Acre
	Yield (Bu)	Yield (Bu)	Yield (Bu)	Yield (Bu)	(Bushels)
1982	125	125	125	129	126
1983	92	75	74	70	73
1984	112	114	114	115	117
1985	115	123	124	124	123
1986	132	129	127	124	122
1987	135	135	135	135	135
1988	70	74	74	78	83
1989	123	128	130	134	133
1990	128	132	132	130	129
1991	98	93	94	94	92
1992	130	130	133	143	147
1993	140	136	133	128	132
1994	132	132	137	141	144
1995	135	125	119	116	113
1996	118	118	120	124	123
1997	127	122	120	120	122
1998	136	139	137	137	137
1999	130	128	128	130	132
2000	155	155	151	147	146
2001	147	152	160	160	156
2002	124	119	117	117	121
2003	144	145	148	150	146
2004	168	168	168	168	168
2005	145	149	149	151	154

Indiana Corn Yield Trend Indiana: 1960 - 2005

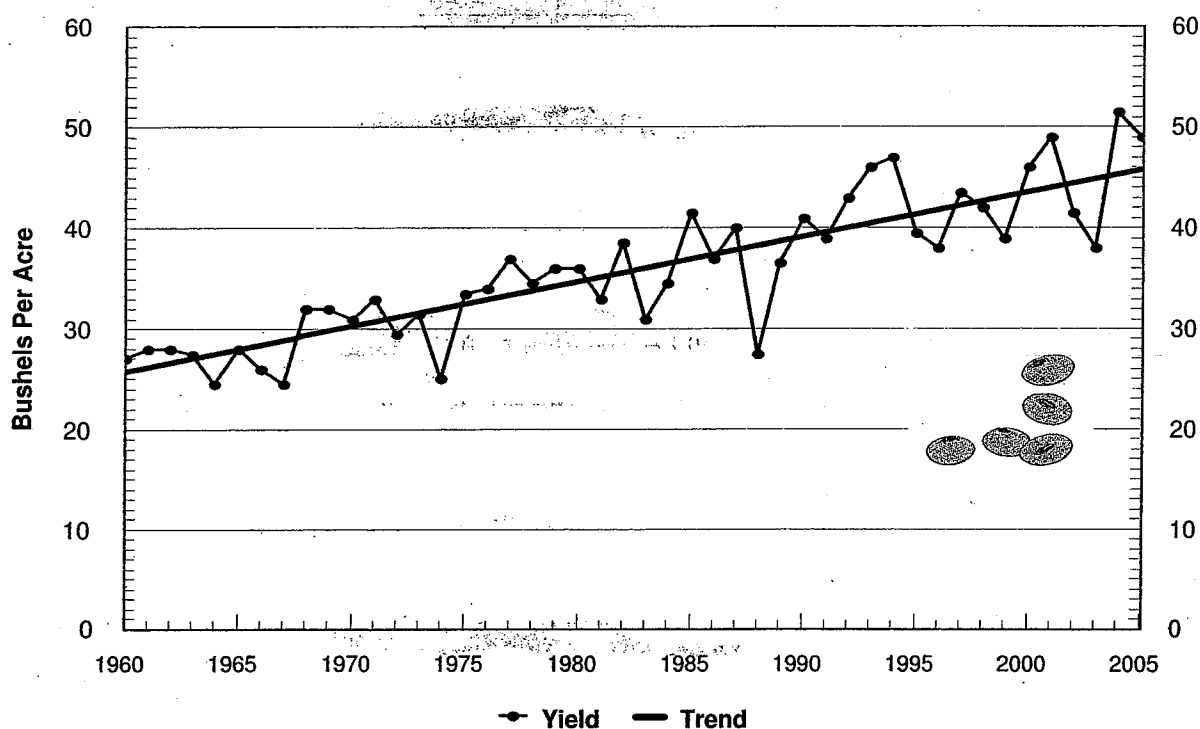


CROP SUMMARY

SOYBEAN FORECAST AND FINAL YIELD INDIANA, 1982-2005

Year	August Forecast	September Forecast	October Forecast	November Forecast	Final Yield Per Acre
	Yield (Bu)	Yield (Bu)	Yield (Bu)	Yield (Bu)	(Bushels)
1982	41.0	40.0	40.0	40.0	38.5
1983	33.0	28.0	30.0	30.0	31.0
1984	35.0	36.0	35.0	34.0	34.5
1985	35.0	38.0	40.0	41.0	41.5
1986	40.0	39.0	39.0	38.0	37.0
1987	42.0	41.0	40.0	40.0	40.0
1988	29.0	30.0	30.0	28.0	27.5
1989	39.0	39.0	39.0	39.0	36.5
1990	36.0	37.0	39.0	41.0	41.0
1991	35.0	35.0	38.0	39.0	39.0
1992	41.0	41.0	41.0	42.0	43.0
1993	45.0	47.0	47.0	45.0	46.0
1994	43.0	43.0	46.0	46.0	47.0
1995	43.0	44.0	40.0	39.0	39.5
1996	35.0	35.0	38.0	39.0	38.0
1997	44.0	42.0	42.0	44.0	43.5
1998	45.0	45.0	42.0	42.0	42.0
1999	41.0	40.0	39.0	38.0	39.0
2000	46.0	46.0	46.0	46.0	46.0
2001	46.0	48.0	49.0	49.0	49.0
2002	41.0	41.0	40.0	41.0	41.5
2003	43.0	43.0	40.0	38.0	38.0
2004	52.0	52.0	51.5	51.5	51.5
2005	46.0	45.0	46.0	48.0	49.0

Indiana Soybean Yield Trend
Indiana: 1960 - 2005



Corn Prices

Source: Indiana Agricultural Statistics

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual Average	Marketing Average *
1988	1.88	1.91	1.97	1.99	2.10	2.51	2.90	2.86	2.78	2.62	2.56	2.65	2.39	2.08
1989	2.72	2.64	2.70	2.66	2.70	2.63	2.65	2.48	2.38	2.32	2.28	2.37	2.54	2.65
1990	2.46	2.43	2.49	2.68	2.81	2.85	2.81	2.75	2.44	2.21	2.18	2.25	2.53	2.47
1991	2.35	2.37	2.43	2.42	2.46	2.37	2.34	2.41	2.37	2.36	2.36	2.44	2.39	2.31
1992	2.55	2.55	2.61	2.58	2.55	2.55	2.36	2.18	2.18	1.92	1.95	1.96	2.33	2.45
1993	2.06	2.04	2.17	2.23	2.20	2.17	2.31	2.37	2.26	2.26	2.52	2.73	2.28	2.09
1994	2.73	2.78	2.76	2.67	2.63	2.66	2.27	2.12	2.18	1.98	1.93	2.12	2.40	2.51
1995	2.25	2.27	2.34	2.41	2.45	2.56	2.76	2.73	2.76	2.85	3.11	3.33	2.65	2.25
1996	3.20	3.42	3.81	4.31	4.52	4.70	4.70	4.55	3.63	2.80	2.69	2.64	3.75	3.38
1997	2.77	2.73	2.86	2.96	2.86	2.73	2.59	2.60	2.60	2.62	2.60	2.61	2.71	2.78
1998	2.66	2.62	2.61	2.46	2.36	2.29	2.17	1.91	1.96	1.97	2.06	2.23	2.28	2.53
1999	2.26	2.20	2.22	2.24	2.15	2.12	1.94	1.97	1.82	1.74	1.75	1.89	2.03	2.11
2000	1.97	2.06	2.08	2.15	2.15	1.95	1.65	1.63	1.67	1.75	1.83	2.06	1.91	1.88
2001	2.03	2.01	2.02	1.98	1.95	1.84	1.97	2.01	1.93	1.83	1.83	1.92	1.94	1.90
2002	1.98	1.99	1.91	1.91	2.05	2.07	2.25	2.58	2.55	2.38	2.41	2.43	2.21	1.98
2003	2.42	2.44	2.44	2.47	2.49	2.44	2.28	2.25	2.27	2.15	2.25	2.46	2.36	2.41
2004	2.50	2.75	2.96	3.07	3.08	2.80	2.57	2.44	2.07	1.88	1.81	1.95	2.49	2.53
2005	2.09	2.01	2.01	1.96	2.02	2.07	2.20	1.97	1.80	1.71	1.71	2.04	1.97	1.99
2006	2.09	2.07	2.15	2.18	2.26	2.21								

IASS has not published this information yet.

*Marketing average is Sept. of the previous year to Aug. in the current year.

Soybean Prices

Source: Indiana Agricultural Statistics

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual Average	Marketing Average *
1988	5.89	5.93	6.29	6.81	7.24	8.71	8.95	8.60	8.09	7.64	7.46	7.71	7.44	5.94
1989	7.76	7.44	7.64	7.32	7.37	7.18	6.95	6.26	5.83	5.62	5.74	5.77	6.74	7.55
1990	5.95	5.75	5.77	5.98	6.14	6.08	6.16	6.13	6.08	5.91	5.77	5.74	5.96	5.79
1991	5.76	5.78	5.76	5.82	5.74	5.57	5.40	5.66	5.76	5.52	5.52	5.51	5.65	5.81
1992	5.60	5.69	5.81	5.75	5.96	6.05	5.69	5.52	5.44	5.25	5.37	5.52	5.64	5.68
1993	5.66	5.65	5.77	5.87	5.94	6.03	6.82	6.84	6.17	5.97	6.42	6.75	6.16	5.61
1994	6.67	6.76	6.82	6.70	6.89	6.74	6.19	5.70	5.49	5.33	5.34	5.54	6.18	6.31
1995	5.54	5.50	5.66	5.68	5.70	5.86	6.10	5.98	6.07	6.24	6.61	6.98	5.99	5.53
1996	6.91	7.16	7.13	7.65	7.95	7.72	7.82	8.10	8.02	6.94	6.90	6.98	7.44	6.73
1997	7.31	7.34	7.94	8.38	8.60	8.22	7.71	7.18	6.54	6.62	6.88	6.68	7.45	7.34
1998	6.80	6.73	6.57	6.37	6.41	6.42	6.38	5.74	5.24	5.23	5.49	5.51	6.07	6.59
1999	5.41	4.94	4.71	4.77	4.63	4.50	4.28	4.55	4.54	4.58	4.56	4.56	4.67	5.05
2000	4.65	4.90	5.06	5.18	5.27	5.11	4.62	4.63	4.71	4.51	4.57	4.93	4.85	4.71
2001	4.74	4.53	4.52	4.25	4.43	4.62	4.98	5.15	4.60	4.17	4.18	4.25	4.54	4.61
2002	4.29	4.34	4.56	4.63	4.79	5.05	5.51	5.67	5.53	5.24	5.53	5.61	5.06	4.42
2003	5.62	5.69	5.70	5.92	6.28	6.15	5.87	5.84	6.49	6.90	7.25	7.44	6.26	5.55
2004	7.38	8.38	9.43	9.76	9.62	9.45	8.89	7.18	5.51	5.24	5.22	5.47	7.63	7.67
2005	5.57	5.46	6.02	5.99	6.32	6.76	6.93	6.29	5.76	5.60	5.61	6.01	6.03	5.66
2006	6.06	5.83	5.75	5.68	5.83	5.80	IASS has not published this information yet.							

*Marketing average is Sept. of the previous year to Aug. in the current year.

CROP PRICES

MONTHLY PRICES RECEIVED BY FARMERS, CROPS INDIANA, 1999-2006 1/

Year	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Marketing Year Avg.
Corn (Dollars per Bushel)													
1999-00	1.82	1.74	1.75	1.89	1.97	2.06	2.08	2.15	2.15	1.95	1.65	1.63	1.88
2000-01	1.67	1.75	1.83	2.06	2.03	2.01	2.02	1.98	1.95	1.84	1.97	2.01	1.90
2001-02	1.93	1.83	1.83	1.92	1.98	1.99	1.91	1.91	2.05	2.07	2.25	2.58	1.98
2002-03	2.55	2.38	2.41	2.43	2.42	2.44	2.44	2.47	2.49	2.44	2.28	2.25	2.41
2003-04	2.27	2.15	2.25	2.46	2.50	2.75	2.96	3.07	3.08	2.80	2.57	2.44	2.53
2004-05	2.07	1.88	1.81	1.95	2.09	2.01	2.01	1.96	2.02	2.07	2.20	1.97	1.99
2005-06	1.80	1.71	1.71	2.04	2.09	2.07	2.15	2.18	2.26	2.21	2/	2/	1.80
Soybeans (Dollars per Bushel)													
1999-00	4.54	4.58	4.56	4.56	4.65	4.90	5.06	5.18	5.27	5.11	4.62	4.63	4.71
2000-01	4.71	4.51	4.57	4.93	4.74	4.53	4.52	4.25	4.43	4.62	4.98	5.15	4.61
2001-02	4.60	4.17	4.18	4.25	4.29	4.34	4.56	4.63	4.79	5.05	5.51	5.67	4.42
2002-03	5.53	5.24	5.53	5.61	5.62	5.69	5.70	5.92	6.28	6.15	5.87	5.84	5.55
2003-04	6.49	6.90	7.25	7.44	7.38	8.38	9.43	9.76	9.62	9.45	8.89	7.18	7.67
2004-05	5.51	5.24	5.22	5.47	5.57	5.46	6.02	5.99	6.32	6.76	6.93	6.29	5.66
2005-06	5.76	5.60	5.61	6.01	6.06	5.83	5.75	5.68	5.83	5.80	2/	2/	5.50
Wheat (Dollars per Bushel)													
1999-00	2.16	2.08	2.19	2.20	2.05	2.12	1.96	2.26	2.39	2.43	2.21	2.20	2.13
2000-01	2.25	2.02	1.99	2.00	1.99	2.20	2.42	2.44	2.47	2.36	2.00	2.31	2.11
2001-02	2.31	2.34	2.51	2.37	3.13	2.89	2.88	3.33	3.20	3.94	3.46	3.88	2.41
2002-03	2.90	3.06	3.44	3.69	3.89	4.03	3.76	3.32	3.04	3.03	3.03	3.08	3.18
2003-04	3.05	3.07	3.35	3.35	3.53	3.71	4.01	3.91	3.63	3.84	3.81	3.87	3.21
2004-05	3.37	3.28	3.01	3.09	2.90	2.85	3.06	3.24	2.98	3.25	2.97	3.08	3.24
2005-06	3.16	3.18	3.16	2.88	3.02	3.00	3.04	3.21	3.34	3.30	2.97	3.43	3.15

1/ Weighted monthly average for market year. 2004 is preliminary.

2/ Data not available.

2000 PURDUE CROP GUIDE* ESTIMATED PER-ACRE CROP BUDGETS

38

Crop Budgets for Three Yield Levels¹

	Low Yield Soil					Average Yield Soil					High Yield Soil				
	Cont. Corn	Rot. Corn	Rot. Beans	Wheat	DC Beans	Cont. Corn	Rot. Corn	Rot. Beans	Wheat	DC Beans	Cont. Corn	Rot. Corn	Rot. Beans	Wheat	DC Beans
Expected yield in bushels per acre ²	102.0	109.7	36.7	60.3	20.8	126.3	135.8	45.5	67.9	25.8	155.4	167.1	56.0	75.2	31.7
Harvest price per bushel	\$2.15	\$2.15	\$5.40	\$2.62	\$5.40	\$2.15	\$2.15	\$5.40	\$2.62	\$5.40	\$2.15	\$2.15	\$5.40	\$2.62	\$5.40
Crop sales per acre	\$219	\$236	\$198	\$158	\$112	\$272	\$292	\$246	\$178	\$139	\$334	\$359	\$302	\$197	\$171
Less variable costs per acre:															
Fertilizer ³	32	30	14	22	7	39	38	17	25	9	48	47	21	30	11
Seed ⁴	18	18	27	13	31	26	26	27	13	31	26	26	27	13	31
Chemicals ⁵	30	16	10		10	34	20	10		10	40	26	10		10
Dryer fuel	10	7			2	12	10			2	14	12			
Fuel @ \$1.00/gallon	7	7	7	4	4	8	8	8	4	4	9	9	9	4	4
Repairs ⁶	8	8	8	4	4	9	9	9	5	4	10	10	10	5	4
Hauling	6	7	2	4	1	8	8	3	4	2	9	10	3	5	2
Interest ⁷	6	6	5	3	4	7	7	5	3	4	8	8	6	3	4
Insurance/misc.	13	13	10	5	2	13	13	10	5	2	13	13	10	5	2
Total variable costs per acre	\$130	\$112	\$83	\$55	\$65	\$156	\$139	\$89	\$59	\$68	\$177	\$161	\$96	\$65	\$70
Contribution margin ⁸ (Sales - variable costs) per acre	\$89	\$124	\$115	\$103	\$47	\$116	\$153	\$157	\$119	\$71	\$157	\$198	\$206	\$132	\$101

¹Harvest prices are higher of January 12, 2000 CBOT closing prices for July wheat - \$1.17 basis, December corn - \$3.30 basis and November beans - \$3.30 basis or Tippecanoe County, 1999 loan rate. Seed fertilizer and chemical prices are early January quotes. Estimated yields and costs are for normal yields with average management for three different soils representing low, average, and high productivity. All soil tests for phosphorus and potassium are in the maintenance range and the pH is in the recommended range. The potash recommendations are for a light color loam or silt loam soil with a Cation Exchange Capacity (CEC) of 10. This recommendation will vary with CEC. On each soil, these estimated yields may vary \pm 10% for weather, \pm 10% for management, \pm 10% for plant/harvest date.

²Average yield based on timely plant/harvest date, except soybean double crop yield which is based on July 1 plant date. Other yields as a percent of rotation corn yield. (Source: ID-152, Estimating Potential Yield for Corn, Soybeans and Wheat) — continuous corn 93%, drill soybeans 33.5% (no budget shown for second year drill beans 31.8% or for 30-inch beans in central Indiana 30.2%), wheat 55% on low yield, 50% on average yield and 45% on high yield soils, and double crop soybeans (South-central Indiana), 19%.

³Fertilizer based on Tri-State Fertilizer recommendations (Source: Extension Bulletin E-2567, July 1995). Lime amounts represent the pounds of standard ag lime needed to neutralize the acidity from the nitrogen supplied from sources other than ammonium sulfate. Pounds of N-P₂O₅-K₂O-lime by crop and soil - Continuous corn, 111-37-47-333, 144-46-54-132, 183-57-61-549; rotation corn, 91-40-49-273, 126-50-56-378, 168-61-65-504; rotation beans, 0-28-69-0, 0-34-80-0, 0-42-94-0; wheat, 57-37-42-171, 70-42-45-210, 92-50-47-276; double crop beans, 0-16-29-0, 0-20-36-0, 0-25-46-0. Fertilizer prices per lb. NH₃ priced @ \$13, Urea @ \$20, P₂O₅ @ \$20, K₂O @ \$12, Lime @ \$12/ton. 5-10% more nitrogen might be needed on both excessively and poorly drained soils.

⁴Add \$7 per acre for 8t corn seed. Soybean seed prices include Round-up Ready varieties. Corn insecticide @ \$14 per acre is included for continuous corn, and should be added to rotation corn in north Indiana.

⁵Repairs are based on approximately five year old machinery. For older machinery per acre repairs and downtime cost will be \$6-10 higher. Inirect machinery replacement costs below will be lower.

⁶Interest is based on 9% annual rate for 9 months for seed, fertilizer, and chemicals and for 6 months for half the machinery fuel, and repairs, and all the insurance/misc.

⁷Contribution margin, plus government payment not listed above, is the returns to the resources (labor/management, machinery services, and land).

*By D. H. Doster, Agricultural Economics; Parsons, S.D., Agricultural and Biological Engineering; Christmas, E. P., Agronomy; Brouder, S. M., Agronomy; Nielsen, R. L., Agronomy

Cooperative Extension work in Agriculture and Home Economics, state of Indiana, Purdue University, and U.S. Department of Agriculture cooperating; D. C. Petritz, Director, West Lafayette, IN. Issued in furtherance of the acts of May 8 and June 30, 1914. The Cooperative Extension Service of Purdue University is an equal opportunity/equal access institution.

ESTIMATED PER FARM CROP BUDGETS FOR 2000
 Effect on Earnings For Each of Four Crop Rotations On Three Soil Types:
 Using Almost the Same Machinery and Labor
 When Farm Size is Adjusted to Permit Timely Fieldwork

	Low Yield Soil				Average Yield Soil				High Yield Soil			
	900	1000 ¹	1200	1200	900	1000	1200	1200	900	1000	1200	1200
Farm Acres	900	1000 ¹	1200	1200	900	1000	1200	1200	900	1000	1200	1200
Rotation ¹	C-C	C-b	C-b	C-b	C-C	C-b	C-b	C-b	C-C	C-b	C-b	C-b
Crops contribution margin ²	\$80100	\$119500	\$141000	\$150400	\$104400	\$155000	\$178400	\$192600	\$141300	\$202000	\$227600	\$247800
Plus government payment ³	<u>11352</u>	<u>12613</u>	<u>19869</u>	<u>19869</u>	<u>14053</u>	<u>15615</u>	<u>24066</u>	<u>24066</u>	<u>17292</u>	<u>19213</u>	<u>28958</u>	<u>28958</u>
Total contribution margin	\$91452	\$132113	\$160869	\$170269	\$118453	\$170615	\$202466	\$216666	\$158592	\$221213	\$256558	\$276758
Annual overhead costs:												
Machinery replacement ⁴	45000	48500	48500	49000	48600	52100	52100	52600	54000	57500	57500	58000
Drying/handling	6300	6300	6300	6300	7200	7200	7200	7200	8100	8100	8100	8100
Family and hired labor ⁵	37000	37000	37000	37000	37000	37000	37000	37000	37000	37000	37000	37000
Land @ 1999 average rent ⁶	<u>85500</u>	<u>95000</u>	<u>114000</u>	<u>114000</u>	<u>106200</u>	<u>118000</u>	<u>141600</u>	<u>141600</u>	<u>134100</u>	<u>149000</u>	<u>178800</u>	<u>178800</u>
Earnings or (losses)	(\$82348)	(\$54687)	(\$44931)	(\$36031)	(\$80547)	(\$43685)	(\$35434)	(\$21734)	(\$74608)	(\$30387)	(\$24842)	(\$5142)

¹Rotations are as follows: C-C = 900 acres continuous corn; C-b = 500 rotation corn - 500 beans; C-b, C-W, dc = 400 corn - 400 beans plus 200 corn - 200 wheat; C-b, C-W, dc = 400 corn - 400 beans plus 200 corn - 200 wheat, double crop beans.

²Crops contribution margin (cm) is per acre contribution margin x number of acres.

³Expected government payment is 2000 payment rate (\$.334 for corn, \$.57 for wheat) x .85 x FSA yield (assumed here to be 81% of expected rotation corn and wheat yield) x acres of farm corn and wheat base (assumed here to be 50% of farm size for corn base on all farms; and 200 acres wheat on 1200 acre farms only).

⁴The same basic machinery set, which is timely for each rotation, is used on all four farms of the same soil type. A no-till drill is added for beans and a larger combine platform is added for dc beans. Average annual replacement costs were calculated using Purdue Machinery Cost Calculator for timely set of fall plow or chisel tillage. Replacement costs for no-till are about 75% of fall chisel tillage. Seven year trading policy assumed for combine and planter, ten year policy for other field machinery. On livestock farms where fewer hours each day are available for crops, or on small farms, machinery costs and/or labor costs will be higher. On well drained soils where more days are suitable for spring field work, machinery costs will be lower.

⁵Family living and hired labor is estimated at \$37,000. In 1998, on 912 farms in the Illinois Farm Business Farm Management Association, family living expenses averaged \$44,790 and net nonfarm income averaged \$17,992.

⁶Based on cash rent @ \$95/acre on low yield soil, \$118/acre on average yield soil, \$149/acre on high yield soil as reported in the Purdue Agricultural Economics Report, September, 1999.

2001 PURDUE CROP GUIDE* ESTIMATED PER ACRE CROP BUDGETS

ID166; Revised

40

Crop Budgets for Three Yield Levels¹

	Low Yield Soil					Average Yield Soil					High Yield Soil				
	Cont. Corn	Rot. Corn	Rot. Beans	Wheat	DC Beans	Cont. Corn	Rot. Corn	Rot. Beans	Wheat	DC Beans	Cont. Corn	Rot. Corn	Rot. Beans	Wheat	DC Beans
Expected yield in bushels per acre ²	103.0	110.9	37.1	61.0	21.0	127.7	137.3	46.0	68.6	26.1	157.1	168.9	56.6	76.0	32.0
Harvest price per bushel	\$2.27	\$2.27	\$5.40	\$2.75	\$5.40	\$2.27	\$2.27	\$5.40	\$2.75	\$5.40	\$2.27	\$2.27	\$5.40	\$2.75	\$5.40
Crop sales per acre	\$234	\$252	\$200	\$168	\$114	\$290	\$312	\$248	\$189	\$141	\$357	\$383	\$306	\$209	\$173
Less variable costs per acre:															
Fertilizer ³	42	39	15	29	9	53	50	18	35	11	65	63	21	40	13
Seed ⁴	24	24	26	13	30	28	28	26	13	30	28	28	26	13	30
Chemicals	31	16	13		9	33	18	13		9	38	23	13		9
Dyer fuel @ \$.80/gallon and handling	12	10	1		2	15	13	1		3	18	16	1		3
Fuel @ \$1.20/gallon	8	8	8	5	4	10	10	10	5	4	11	11	11	5	4
Repairs ⁵	8	8	8	4	4	9	9	9	5	4	10	10	10	5	4
Hauling	6	7	2	4	1	8	3	3	4	2	9	10	3	5	2
Interest ⁶	8	5	4	3	4	9	8	5	4	4	10	9	5	4	4
Insurance/misc.	11	11	8	7	4	11	11	8	7	4	11	11	8	7	4
Total variable costs per acre	\$150	\$128	\$85	\$65	\$67	\$176	\$155	\$93	\$73	\$71	\$200	\$181	\$98	\$79	\$73
Contribution margin (Sales - variable costs) per acre	\$84	\$124	\$115	\$103	\$47	\$114	\$157	\$155	\$116	\$70	\$157	\$202	\$208	\$130	\$100

¹Harvest prices are the higher of January 17, 2001 CBOT closing prices for July wheat, \$.30 basis, December corn, \$.25 basis and November beans, \$.30 basis or the Tippecanoe County, 2000 loan rate. Seed fertilizer, and chemical prices are early January quotes. Estimated yields and costs are for normal yields with average management for three different soils representing low, average, and high productivity. All soil tests for phosphorus and potassium are in the maintenance range and the pH is in the recommended range. The potash recommendations are for a light color loam or silt loam soil with a Cation Exchange Capacity (CEC) of 10. This recommendation will vary with CEC. On each soil, these estimated yields may vary \pm 10% for weather, \pm 10% for management, \pm 10% for plant/harvest date.

²Average yield based on timely plant/harvest date, except soybean double crop yield which is based on July 1 plant date. Other yields as a percent of rotation corn yield (Source: ID-157 "Estimating Potential Yield for Corn, Soybeans and Wheat") — continuous corn 93%, drill soybeans 33.5% (second year drill beans or for 30-inch beans in central Indiana 30.2%), wheat 55% on low yield, 50% on average yield and 45% on high yield soils, and double crop soybeans (South-central Indiana) 19%.

³Fertilizer based on Tri-State Fertilizer recommendations (Source: Extension Bulletin E-2567, July 1995). Lime amounts represent the pounds of standard ag lime needed to neutralize the acidity from the nitrogen supplied from sources other than ammonium sulfate. Pounds of N-P-K: Continuous corn, 114-38-48-34.3; 148-47-55-44.3; 188-58-62-56.3; rotation corn, 95-41-50-28.5; 131-51-57-39.2; 174-63-66-52.1; rotation beans, 0-30-72-0; 0-37-84-0; 0-45-99-0; wheat, 59-38-43-178; 73-43-45-218; 86-48-48-257; double crop beans, 0-17-49-0; 0-21-57-0; 0-26-65-0. Fertilizer prices per lb. N-P-K @ \$.22/urea @ \$.27, P₂O₅ @ \$.18, after accounting for nitrogen @ \$.22 in 18-46-0, K₂O @ \$.13, lime @ \$12/ton, 5-10% more nitrogen might be needed on both excessively and poorly drained soils.

⁴Add \$.7 per acre for Bt corn seed. Soybean seed prices include Round-up Ready varieties. Corn insecticide @ \$.15 per acre is included for continuous corn, and should be added to rotation corn in north Indiana.

⁵Repairs are based on approximately five year old machinery. For older machinery per acre repairs and downtime cost will be \$.6-1.0 higher, and indirect machinery replacement costs below will be lower.

⁶Interest is based on 9.5% annual rate for 9 months for seed, fertilizer, and chemicals and for 6 months for half the machinery, fuel, and repairs, and all the insurance/misc.

⁷Contribution margin is the returns to the unpaid operator labor/management, machinery services, and land resources. The contribution margins not shown above are \$97, \$139, and \$179 for second year drill beans on low, average and high yield soils.

*By D. H. Doster, Agricultural Economics; Parsons, S.D., Agricultural and Biological Engineering; Christmas, E. P., Agronomy; Brouder, S. M., Agronomy; Nielsen, R. L., Agronomy.

Cooperative Extension work in Agriculture and Home Economics, state of Indiana, Purdue University, and U.S. Department of Agriculture cooperating. D.C. Petritz, Director, West Lafayette, IN. Issued in furtherance of the acts of May 8 and June 30, 1914. The Cooperative Extension Service of Purdue University is an equal opportunity/sexual access institution.

ESTIMATED PER FARM CROP BUDGETS FOR 2001
 Effect on Earnings For Each of Four Crop Rotations On Three Soil Types
 Using Almost the Same Machinery and Labor
 After Farm Size has been Adjusted to Permit Timely Fieldwork

	Low Yield Soil				Average Yield Soil				High Yield Soil			
	900	1000	1200	1200	900	1000	1200	1200	900	1000	1200	1200
Farm Acres	900	1000	1200	1200	900	1000	1200	1200	900	1000	1200	1200
Rotation ¹	c-c	c-b	c-b	c-b	c-c	c-b	c-b	c-b	c-c	c-b	c-b	c-b
Crops contribution margin ²	\$75600	\$119500	\$141000	\$150400	\$102600	\$156000	\$179400	\$193400	\$141300	\$205000	\$230400	\$250400
Plus government payment ³	9128	12740	18181	18770	11301	15777	22067	22798	13900	19405	26602	27498
Total contribution margin	\$84728	\$132340	\$159181	\$169170	\$113901	\$171777	\$201467	\$216198	\$155200	\$224405	\$257002	\$277898
Annual overhead costs:												
Machinery replacement ⁴	45000	48500	48500	49000	48600	52100	52100	52600	54000	57500	57500	58000
Drying/handling	6300	6300	6300	6300	7200	7200	7200	7200	8100	8100	8100	8100
Family and hired labor ⁵	37000	37000	37000	37000	37000	37000	37000	37000	37000	37000	37000	37000
Land @ 2000 average rent ⁶	88200	98000	117600	117600	108900	121000	145200	145200	135000	150000	180000	180000
Earnings or (losses)	(\$91772)	(\$57460)	(\$50219)	(\$40730)	(\$87799)	(\$45522)	(\$40033)	(\$25802)	(\$78900)	(\$28195)	(\$25598)	(\$5202)

Rotations are as follows: c-c = 900 acres continuous corn; c-b = 500 rotation corn - 500 beans; c-b, c-w = 400 corn - 400 beans plus 200 corn - 200 wheat; c-b, c-w, dc = 400 corn - 400 beans plus 200 corn - 200 wheat, double crop beans (dc).

Crops contribution margin is per acre contribution margin x number of acres.

Expected government payment is 2001 payment rate (\$.269 for corn, \$.474 for wheat) x .85 x FSA yield (assumed here to be 80% of expected rotation corn and wheat yield) x acres of farm corn and wheat base (assumed here to be 50% of farm size for corn base on all farms and 200 acres wheat on 1200 acre farms only), plus \$.14 per bushel soybean oilseed payment.

The same basic machinery set, which is timely for each rotation, is used on all four farms of the same soil type. A no-till drill is added for beans and a larger combine platform is added for double-crop beans. Average annual replacement costs were calculated using the Purdue Machinery Cost Calculator for timely set of fall plow or chisel tillage. Replacement costs for no-till are about 75% of fall chisel tillage. Seven year trading policy assumed for combine and planter, ten year policy for other field machinery. On livestock farms where fewer hours each day are available for crops, or on small farms, machinery costs and/or labor costs will be higher. On well drained soils where more days are suitable for spring field work, machinery costs could be lower.

⁵Family living and/or hired labor is estimated at \$37,000. In 1999, on 938 farms in the Illinois Farm Business Farm Management Association, family living expenses averaged \$45,225 and net nonfarm income averaged \$19,170.

⁶Based on cash rent @ \$98/acre on low yield soil, \$121/acre on average yield soil, \$150/acre on high yield soil as reported in the Purdue Agricultural Economics Report, September, 2000.

2002 PURDUE CROP GUIDE*

ESTIMATED PER ACRE CROP BUDGETS

Crop Budgets for Three Yield Levels¹

	Low Yield Soil			Average Yield Soil						High Yield Soil					
	Cont. Corn	Rot. Corn	Rot. Beans	Wheat	DC Beans	Cont. Corn	Rot. Corn	Rot. Beans	Wheat	DC Beans	Cont. Corn	Rot. Corn	Rot. Beans	Wheat	DC Beans
Expected yield in bushels per acre ²	104.3	112.1	37.5	61.6	21.3	129.1	138.8	46.5	69.4	26.4	158.8	170.8	57.2	76.9	32.4
Harvest price per bushel ³	<u>\$2.10</u>	<u>\$2.10</u>	<u>\$5.40</u>	<u>\$2.56</u>	<u>\$5.40</u>	<u>\$2.10</u>	<u>\$2.10</u>	<u>\$5.40</u>	<u>\$2.56</u>	<u>\$5.40</u>	<u>\$2.10</u>	<u>\$2.10</u>	<u>\$5.40</u>	<u>\$2.56</u>	<u>\$5.40</u>
Crop sales per acre	\$219	\$235	\$203	\$158	\$115	\$271	\$291	\$251	\$178	\$143	\$333	\$359	\$309	\$197	\$175
Less variable costs per acre ⁴ :															
Fertilizer ⁵	\$38	\$35	\$17	\$30	\$11	\$47	\$45	\$20	\$35	\$12	\$57	\$56	\$24	\$40	\$15
Seed ⁶	26	26	30	13	35	30	30	30	13	35	30	30	30	13	35
Chemicals ⁷	31	16	14	N/A	12	34	18	14	N/A	12	38	23	14	N/A	12
Dryer fuel @ \$.80/gallon and handling	12	10	1	N/A	2	15	13	1	N/A	3	18	15	1	N/A	3
Fuel @ \$.95/gallon	7	7	7	4	3	8	8	8	4	3	9	9	9	4	3
Repairs ⁸	8	8	8	4	4	9	9	9	5	4	10	10	10	5	4
Hauling	6	7	2	4	1	8	8	3	4	2	10	10	3	5	2
Interest ⁹	5	4	3	2	3	6	5	4	3	3	7	6	4	3	3
Insurance/misc.	11	11	8	2	4	11	11	8	2	4	11	11	8	2	4
Total variable costs per acre	<u>\$144</u>	<u>\$124</u>	<u>\$90</u>	<u>\$64</u>	<u>\$75</u>	<u>\$168</u>	<u>\$147</u>	<u>\$97</u>	<u>\$71</u>	<u>\$78</u>	<u>\$190</u>	<u>\$170</u>	<u>\$103</u>	<u>\$77</u>	<u>\$81</u>
Contribution margin ¹⁰ (Sales - variable costs) per acre	\$75	\$111	\$113	\$94	\$40	\$103	\$144	\$154	\$107	\$65	\$143	\$189	\$206	\$120	\$94

¹ Estimated yields and costs are for normal yields with average management for three different soils representing low, average, and high productivity.

² Average yield based on timely plant/harvest date, except soybean double crop yield which is based on July 1 plant date. Continuous corn, soybean & wheat yields are a percent of rotation corn yield — continuous corn 93%, drill soybeans 33.5% (second year drill beans or for 30-inch beans in central Indiana 30.2%), wheat 55% on low yield, 50% on average yield and 45% on high yield soils, and double crop soybeans (South-central Indiana) 19% (Source: ID-152 "Estimating Potential Yield for Corn, Soybeans and Wheat").

³ Harvest prices are the higher of December 31, 2001 CBOT closing prices for July wheat -\$.30 basis, December corn -\$.25 basis, and November beans-\$.30 basis or the Tippecanoe County, 2001 loan rate. Seed, fertilizer, and chemical prices are early January quotes.

⁴ Fertilizer based on tri-state fertilizer recommendations (Source: Michigan Extension Bulletin E-2567, July 1995). Lime amounts represent the pounds of standard ag lime needed to neutralize the acidity from the nitrogen supplied from sources other than ammonium sulfate. Pounds of N-P₂O₅-K₂O-lime by crop and soil: Continuous corn, 116-39-48-347, 150-48-55-449, 190-59-63-570; rotation corn, 97-42-50-290, 133-51-58-398, 176-63-66-529; rotation beans, 0-30-72-0, 0-37-85-0, 0-45-100-0; wheat, 60-39-43-181, 74-44-46-227, 87-48-48-261; double crop beans, 0-17-50-0, 0-21-57-0, 0-26-65-0. Fertilizer prices per lb.: NH₃ @ \$.16, urea @ \$.23; P₂O₅ @ \$.23, after accounting for nitrogen @ \$.16 in 18-46-0; K₂O @ \$.13; lime @ \$.14/ton. 5-10% more nitrogen might be needed on both excessively and poorly drained soils. All soil tests for phosphorus and potassium are in the maintenance range, and the pH is in the recommended range. The pH color loam or silt loam soil with a Cation Exchange Capacity (CEC) of 10. This recommendation will vary with CEC. On each soil, these estimated yields may vary ± 10% for weather, ± 10% for management, and ± 10% for plant/harvest date.

⁵ Add \$7 per acre for Bt corn seed. Soybean seed prices include Round-up Ready varieties.

⁶ Corn insecticide @ \$.16 per acre is included for continuous corn, and should be added to rotation corn in north Indiana. Repairs are based on approximately five-year-old machinery. For older machinery, per acre repairs and downtime cost will be \$6-10 higher, and indirect machinery replacement costs below will be lower.

⁷ Interest is based on 6.5% annual rate for 9 months for seed, fertilizer, and chemicals, and for 6 months for half the machinery fuel and repairs, and all the insurance/misc.

⁸ Contribution margin is the return to the unpaid operator labor/management, machinery services, and land resources. The contribution margins, not shown above, are \$95, \$132, and \$177 for second year drill beans on low, average, and high yield soils.

*By C. L. Dobbins, Miller, W. A., Doster, D. H., Agricultural Economics; Christmas, E. P., Nielsen, R. L., Agronomy

Cooperative Extension work in Agriculture and Home Economics, state of Indiana, Purdue University, and U.S. Department of Agriculture cooperating; D. C. Petritz, Director, West Lafayette, IN. Issued in furtherance of the acts of May 8 and June 30, 1914. The Cooperative Extension Service of Purdue University is an equal opportunity/equal access institution.

ESTIMATED PER FARM CROP BUDGETS FOR 2002
Effect on Earnings for Each of Four Crop Rotations on Three Soil Types
Using Almost the Same Machinery and Labor
After Farm Size Has Been Adjusted to Permit Timely Fieldwork

Farm Acres	Low Yield Soil				Average Yield Soil				High Yield Soil			
	900	1000	1200	1200	900	1000	1200	1200	900	1000	1200	1200
Rotation ¹	c-c	c-b	c-b	c-w, dc	c-c	c-b	c-b	c-w, dc	c-c	c-b	c-b	c-b
Crops contribution margin ²	\$67500	\$112000	\$130600	\$138600	\$92700	\$149000	\$169400	\$182400	\$128700	\$197500	\$219800	\$238600
Plus government payment ³	<u>8955</u>	<u>12575</u>	<u>17887</u>	<u>18483</u>	<u>11081</u>	<u>15568</u>	<u>21710</u>	<u>22449</u>	<u>13637</u>	<u>19156</u>	<u>26185</u>	<u>27092</u>
Total contribution margin	\$76455	\$124575	\$148487	\$157083	\$103781	\$164568	\$191110	\$204849	\$142337	\$216656	\$245985	\$265692
Annual overhead costs:												
Machinery replacement ⁴	45000	48500	48500	49000	48600	52100	52100	52600	54000	57500	57500	58000
Drying/handling	6300	6300	6300	6300	7200	7200	7200	7200	8100	8100	8100	8100
Family and hired labor ⁵	37000	37000	37000	37000	37000	37000	37000	37000	37000	37000	37000	37000
Land @ 2001 average rent ⁶	<u>88200</u>	<u>98000</u>	<u>117600</u>	<u>117600</u>	<u>109800</u>	<u>122000</u>	<u>146400</u>	<u>146400</u>	<u>136800</u>	<u>152000</u>	<u>182400</u>	<u>182400</u>
Earnings or (losses)	(\$100045)	(\$65225)	(\$60913)	(\$52817)	(\$98819)	(\$53732)	(\$51590)	(\$38351)	(\$93563)	(\$37944)	(\$39015)	(\$19808)

¹Rotations are as follows: c-c = 900 acres continuous corn; c-b = 500 rotation corn - 500 beans; c-b, c-w = 400 corn - 400 beans plus 200 corn - 200 wheat; c-b, c-w, dc = 400 corn - 400 beans plus 200 corn - 200 wheat, double crop beans (dc).

²Crops contribution margin is per acre contribution margin x number of acres.

³Expected government payment is 2002 payment rate (\$.261 for corn, \$.459 for wheat) x .85 x FSA yield (assumed here to be 80% of expected rotation corn and wheat yield) x acres of farm corn and wheat base (assumed here to be 50% of farm size for corn base on all farms and 200 acres wheat on 1200 acre farms only), plus \$.14 per bushel soybean oilseed payment.

⁴The same basic machinery set, which is timely for each rotation, is used on all four farms of the same soil type. A no-till drill is added for beans, and a larger combine platform is added for double-crop beans. Average annual replacement costs were calculated using the Purdue Machinery Cost Calculator for timely set of fall plow or chisel tillage. Replacement costs for no-till are about 75% of fall chisel tillage. Seven year trading policy assumed for combine and planter, ten year policy for other field machinery. On livestock farms where fewer hours each day are available for crops, or on small farms, machinery costs and/or labor costs will be higher. On well drained soils where more days are suitable for spring field work, machinery costs could be lower.

⁵Family living and/or hired labor is estimated at \$37,000. In 2000, on 1,087 farms in the Illinois Farm Business Farm Management Association, family living expenses averaged \$47,526 and net nonfarm income averaged \$22,424.

⁶Based on cash rent @ \$98/acre on low yield soil, \$122/acre on average yield soil, \$152/acre on high yield soil (Source: Purdue Agricultural Economics Report, September, 2001).

Purdue Crop Cost & Return Guide January 2003
Table 1. Estimated Per Acre Crop Budgets

	Crop Budgets for Three Yield Levels ¹											
	Miami (Low Yield)						Crosby (Average Yield)					
	Cont.	Rot.	Rot.	Second-	DC	Cont.	Cont.	Rot.	Rot.	Second-	DC	Cont.
	Corn	Corn	Beans	Year	Beans	Corn	Corn	Beans	Beans	Year	Wheat	Beans
Expected yield per acre ²	105.4	113.4	37.9	34.1	62.3	130.5	140.3	47.0	42.3	70.2	26.7	160.6
Harvest price ³	\$2.16	\$2.16	\$4.83	\$4.83	\$2.71	\$2.16	\$2.16	\$4.83	\$4.83	\$2.71	\$4.83	\$2.16
Market Revenue	\$228	\$245	\$183	\$165	\$169	\$282	\$303	\$227	\$204	\$190	\$129	\$347
Loan Deficiency Payment (LDP) ⁴	0	0	12	11	0	0	0	15	13	0	8	0
Total revenue	\$228	\$245	\$195	\$176	\$169	\$282	\$303	\$242	\$217	\$190	\$137	\$347
Less variable costs ⁵												
Fertilizer ⁶	\$42	\$38	\$16	\$15	\$31	\$52	\$49	\$20	\$18	\$36	\$12	\$64
Seed ⁷	26	26	30	30	16	30	30	30	30	16	35	30
Chemicals ⁸	31	16	15	15	N/A	34	18	15	15	N/A	13	39
Dryer Fuel & Handling	14	12	1	1	N/A	17	15	1	1	N/A	3	22
Machinery Fuel	8	8	8	8	5	10	10	10	10	5	4	11
Machinery Repairs ⁹	8	8	8	8	4	9	9	9	9	5	4	11
Hauling	6	7	2	2	4	8	8	3	3	4	2	10
Interest ¹⁰	4	4	3	3	2	5	4	3	3	2	3	6
Insurance/misc.	11	11	8	8	7	11	11	8	8	8	4	11
Total variable cost	\$150	\$130	\$91	\$90	\$69	\$176	\$164	\$89	\$97	\$76	\$80	\$203
Contribution margin ¹¹ (Revenue - Variable costs) per acre	\$78	\$115	\$104	\$86	\$100	\$106	\$149	\$143	\$120	\$114	\$57	\$144

¹Estimated yields and costs are for normal yields with average management for three different soils representing low, average, and high productivity. On each soil, these estimated yields may vary + 10% for management, and + 10% for plant/harvest date. These yields assume normal weather conditions.

²Average yield based on timely plant/harvest date, except soybean double crop yield which is based on July 1 plant date. Continuous corn, soybean & wheat yields are a percent of rotation corn yield - continuous corn 83%, drill soybeans 33.5% (second year drill beans or for 30-inch beans in central Indiana 30.2%), wheat 55% on low yield, 50% on average yield, and 45% on high yield soils, and double crop soybeans (South-central Indiana) 19% (Source: ID-152 "Estimating Potential Yield for Corn, Soybeans, and Wheat")

³Harvest corn price is closing December 2003 CBOT futures price on December 27, 2002 less \$0.25 basis. Harvest soybean price is closing November 2003 CBOT price on December 27, 2002, less \$0.30 basis. Harvest wheat price is closing July 2003 CBOT price on December 27, 2002, less \$0.30 basis.

⁴Loan Deficiency Payment is paid on all business produced. The per bushel payment is the amount by which the loan rate exceeds the market price. Loan rates are \$2.05 for corn, \$5.14 for soybeans, and \$2.52 for wheat.

⁵Seed, fertilizer, and chemical prices are early January 2003 quotes.

⁶Fertilizer based on tri-state fertilizer recommendations (Source: Michigan Extension Bulletin E-2567, July 1995). Lime amounts represent the pounds of standard ag lime needed to neutralize the acidity from the nitrogen supplied from sources other than ammonium sulfate. Pounds of N-P-K₂O-lime by crop and soil. Continuous corn, 117-39-48-352, 152-48-55-454, 192-59-63-577; rotation corn, 98-42-51-294, 135-52-58-407, 179-64-67-536; rotation beans, 0-30-73-0, 0-37-86-0, 0-46-101-0, wheat, 62-39-43-185, 75-44-46-227, 89-49-49-285; double crop beans, 0-17-50-0, 0-21-57-0, 0-26-66-0. Fertilizer prices per lb.: NH₃ @ \$.19, urea @ \$.25; P₂O₅ @ \$.22; K₂O @ \$.13; lime @ \$14/ton. 5-10% more nitrogen might be needed on both excessively and poorly drained soils. All soil tests for phosphorus and potassium are in the maintenance range, and the pH is in the recommended range.

⁷Add \$7 per acre for Bt corn seed. Soybean seed prices include round-up Ready varieties.

⁸Com insecticide @ \$16 per acre is included for continuous corn and should be added to rotation corn in northern Indiana.

⁹Repairs are based on approximately five-year-old machinery. For older machinery, per acre repairs and downtime cost will be \$6-10 higher, and indirect machinery costs will be lower.

¹⁰Interest is based on 5.5% annual rate for 9 months for seed, fertilizer, and chemicals, and for 6 months for half the machinery fuel and repairs, and all the insurance/misc.

¹¹Contribution margin is the return to the unpaid operator/land/management, machinery services, and land resources.

Purdue Crop Cost & Return Guide January 2003
Table 2. Estimated Per Farm Crop Budgets For 2003 - January Estimates
 Effect on Earnings for Each of Four Crop Rotations on Three Soil Types Using Similar Machinery and Labor When Farm Size is Adjusted to Permit Timely Fieldwork¹

Farm Acres	(Miami) Low Yield Soils				(Crosby) Average Yield Soils				(Brookston) High Yield Soils			
	900	1000	1200	1200	900	1000	1200	1200	900	1000	1200	1200
Rotation	c-c	c-b	c-b, c-w	c-b, c-w, dc	c-c	c-b	c-b, c-w	c-b, c-w, dc	c-c	c-b	c-b, c-w	c-b, c-w, dc
Crop contribution margin ²	\$70,200	\$109,500	\$130,600	\$137,600	\$95,400	\$146,000	\$169,400	\$180,800	\$129,600	\$192,500	\$218,000	\$235,200
Government payment ³	24,372	22,855	32,508	32,508	28,773	27,085	37,958	37,958	35,532	33,450	45,612	45,612
Total contribution margin	\$94,572	\$132,355	\$163,108	\$170,108	\$124,173	\$173,085	\$207,358	\$218,758	\$165,132	\$225,950	\$263,612	\$280,812
Annual overhead costs:												
Machinery replacement ⁴	45,000	48,500	48,500	49,000	48,600	52,100	52,100	52,600	54,000	57,500	57,500	58,000
Drying/handling	6,300	6,300	6,300	6,300	7,200	7,200	7,200	7,200	8,100	8,100	8,100	8,100
Family and hired labor ⁵	37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000
Land ⁶	\$90,900	\$101,000	\$121,200	\$121,200	\$112,500	\$125,000	\$150,000	\$150,000	\$138,600	\$154,000	\$184,800	\$184,800
Earnings or (losses)	\$ (84,628)	\$ (60,445)	\$ (49,892)	\$ (43,392)	\$ (81,127)	\$ (48,215)	\$ (38,942)	\$ (28,042)	\$ (72,568)	\$ (30,650)	\$ (23,788)	\$ (7,088)

¹Rotations are as follows: c-c = 900 acres continuous corn; c-b = 500 acres rotation corn - 500 acres soybeans; c-b, c-w = 400 acres corn - 400 acres soybeans plus 200 acres corn - 200 acres wheat; c-b, c-w, dc = 400 acres corn - 400 acres soybeans plus 200 acres corn - 200 acres wheat, double crop beans (dc).

²Crops contribution margin is per acre contribution margin from Table 1 times number of acres.

³Government payment includes the direct payment and the counter cyclical payment. The per bushel direct payment rate is \$0.28 for corn, \$0.44 for soybeans and \$0.54 for wheat. Direct payment yields for corn were 94.5, 110.5, 136.6 on low, average, and high soils. Direct payment yields for soybeans were 31.7, 37.0, and 45.8 for low, average, and high soils.

Direct payment yields for wheat were 45.8, 49.3, 55.5 on low, average, and high soils. The counter cyclical payments were based on a target price of \$2.60 for corn, \$5.80 for soybeans, and \$3.86 for wheat. The average marketing year price assumed was \$2.27 for corn, \$5.07 for soybeans, and \$2.90 for wheat. The counter cyclical yields for corn were 108.1, 133.4, and 164.1 for low, average, and high soils. The counter cyclical yields for soybeans were 36.2, 44.7, and 55.0 for low, average and high soils. The counter cyclical yields for wheat were 59.5, 66.7, 73.8 for low, average, and high soils. A base acre of each acre of crop raised was assumed.

⁴The same basic machinery set, which is timely for each rotation, is used on all four farms of the same soil type. A no-till drill is added for beans, and a larger combine platform is added for double-crop beans. Average annual replacement costs were calculated using the Purdue Machinery Cost Calculator for timely set of fall plow or chisel tillage. Replacement costs for no-till are about 75% of fall chisel tillage. Seven year trading policy assumed for combine and planter, ten year policy for other field machinery. On livestock farms where fewer hours each day are available for crops, or on small farms, machinery costs and/or labor costs will be higher. On well drained soils where more days are suitable for spring field work, machinery costs could be lower.

⁵Labor expenses include a family living withdrawal of \$24,723 (\$48,097 of family living expenses less \$23,374 in net nonfarm income reported by Illinois Farm Business Farm Management Association records in 2001) and \$12,000 for hired labor.

⁶Based on cash rent at \$101 per acre on low yield soil, \$125 per acre on average yield soil, and \$154 on high yield soil.

Purdue Crop Cost & Return Guide January 2004
Table 1. Estimated Per Acre Crop Budgets

ID-165W (Rev)

	Crop Budgets for Three Yield Levels									
	Miami (Low Yield)					Crosby (Average Yield)				
	Cont. Corn	Rot. Corn	Rot. Beans	Year Beans	Second- Year Wheat	Cont. Corn	Rot. Corn	Rot. Beans	Year Beans	Second- Year Wheat
Expected yield per acre ²	106.6	114.6	37.1	33.4	61.0	131.9	141.9	46.0	41.4	68.6
Harvest price ³	\$2.29	\$2.29	\$6.14	\$6.14	\$3.56	\$2.29	\$2.29	\$6.14	\$6.14	\$3.56
Market Revenue	\$244	\$262	\$228	\$205	\$217	\$302	\$325	\$282	\$254	\$244
Loan Deficiency Payment (LDP) ⁴	0	0	0	0	0	0	0	0	0	0
Total revenue	\$244	\$262	\$228	\$205	\$217	\$302	\$325	\$282	\$254	\$244
Less variable costs ⁵										
Fertilizer ⁶	\$50	\$46	\$18	\$17	\$37	\$62	\$60	\$22	\$20	\$43
Seed ⁷	28	28	33	33	20	33	33	33	33	20
Chemicals ⁸	32	16	16	16	N/A	34	19	16	16	N/A
Dryer Fuel & Handling	14	12	1	1	N/A	18	15	1	1	N/A
Machinery Fuel @ \$1.20	8	8	8	8	5	10	10	10	10	5
Machinery Repairs ⁹	6	8	2	2	4	9	9	3	3	4
Hauling ¹⁰	5	4	3	3	3	6	5	4	3	3
Insurance/misc.	11	11	8	8	7	11	11	8	8	4
Total variable cost	\$162	\$140	\$97	\$96	\$80	\$191	\$171	\$106	\$102	\$88
Contribution margin ¹¹ (Revenue - Variable costs) Per acre	\$82	\$122	\$131	\$109	\$137	\$111	\$154	\$176	\$152	\$156

Estimated yields and costs are for normal yields with average management for three different soils representing low, average, and high productivity. On each soil, these estimated yields may vary \pm 10% for management, and \pm 10% for plant/harvest date. These yields assume normal weather conditions.

² Average yield based on timely plant/harvest date, except soybean double crop yield, which is based on July 1 plant date. Continuous corn, soybean, and wheat yields are a percent of rotation corn yield: continuous corn 83%, drill soybeans 33.5% (second year drill beans or for 30-inch beans in central Indiana 30.2%); wheat 55% on low yield, 50% on average yield, and 45% on high yield soils; and double crop soybeans (South-central Indiana) 19% (Source: ID-152, "Estimating Potential Yield for Corn, Soybeans, and Wheat").

³ Harvest corn price is December 2004 CBOT opening futures price on January 6, 2004 less \$0.25 basis; Harvest soybean price is November 2004 CBOT opening futures price on January 6, 2004, less \$0.30 basis.

⁴ Loan Deficiency Payment is paid on all bushels produced. The per bushel payment is the amount by which the loan rate exceeds the market price. Loan rates are \$2.01 for corn, \$5.12 for soybeans, and \$2.49 for wheat.

⁵ Seed, fertilizer, chemical, and fuel prices are early January 2004 quotes.

⁶ Fertilizer based on tri-state fertilizer recommendations (Source: Michigan Extension Bulletin E-2567, July 1995). Lime amounts represent the pounds of standard ag lime needed to neutralize the acidity from the nitrogen supplied from sources other than ammonium sulfate. Pounds of N-P₂O₅-K₂O-lime by crop and soil: continuous corn, 119-39-49-357; 153-49-56-460; 195-60-64-585; rotation corn, 100-42-51-300; 137-52-58-411; 182-65-67-544; rotation beans, 0-31-74-0, 0-38-86-0, 0-47-102-0, wheat, 53-40-43-188, 77-45-46-230, 90-49-49-270; double crop beans, 0-17-50-0, 0-22-58-0, 0-26-66-0. Fertilizer prices per lb.: NH₃ @ \$0.24; urea @ \$0.32; P₂O₅ @ \$0.28; K₂O @ \$0.14, lime @ \$16/ton. 5-10% more nitrogen might be needed on both excessively and poorly drained soils. All soil tests for phosphorus and potassium are in the maintenance range, and the pH is in the recommended range.

⁷ Add \$7 per acre for Bt corn seed. Soybean seed prices include Round-Up Ready® varieties

⁸ Corn insecticide @ \$16 per acre is included for continuous corn and should be added to rotation corn in northern Indiana.

⁹ Repairs are based on approximately five-year-old machinery. For older machinery, per acre repairs and downtime cost will be \$6-10 higher, and indirect machinery costs will be lower.

¹⁰ Interest is based on 6.0% annual rate for 9 months for seed, fertilizer, and chemicals, and for 6 months for half the machinery, fuel and repairs and all the insurance/misc.

¹¹ Contribution margin is the return to the unpaid operator labor/management, machinery services, and land resources.

Purdue Crop Cost & Return Guide January 2004
Table 2. Estimated Per Farm Crop Budgets For 2004 - January Estimates
 Effect on Earnings for Each of Four Crop Rotations on Three Soil Types Using Similar Machinery and Labor When Farm Size is Adjusted to Permit Timely Fieldwork¹

Farm Acres	(Miami) Low Yield Soils						(Crosby) Average Yield Soils						(Brookston) High Yield Soils					
	900	1000	1200	1200	1200	dc	900	1000	1200	1200	1200	dc	900	1000	1200	1200	1200	dc
Rotation	c-c	c-b	c-b	c-b, c-w	c-b, c-w	dc	c-c	c-b	c-b	c-b, c-w	c-b, c-w	dc	c-c	c-b	c-b	c-b, c-w	c-b, c-w	dc
Crop contribution margin ²	\$73,800	\$126,500	\$153,000	\$163,400	\$163,400		\$99,900	\$165,000	\$194,000	\$210,200	\$210,200		\$135,900	\$218,500	\$250,200	\$273,200	\$273,200	
Government payment ³	20,241	17,175	22,596	22,596	22,596		23,670	20,070	26,222	26,222	26,222		29,259	24,820	31,794	31,794	31,794	
Total contribution margin	\$94,041	\$143,675	\$175,596	\$185,996	\$185,996		\$123,570	\$185,070	\$220,222	\$236,422	\$236,422		\$165,159	\$243,320	\$281,994	\$304,994	\$304,994	
Annual overhead costs:																		
Machinery replacement ⁴	45,000	48,500	48,500	49,000	49,000		48,600	52,100	52,100	52,600	52,600		54,000	57,500	57,500	58,000	58,000	
Drying/handling	6,300	6,300	6,300	6,300	6,300		7,200	7,200	7,200	7,200	7,200		8,100	8,100	8,100	8,100	8,100	
Family and hired labor ⁵	37,000	37,000	37,000	37,000	37,000		37,000	37,000	37,000	37,000	37,000		37,000	37,000	37,000	37,000	37,000	
Land ⁶	\$92,700	\$103,000	\$123,600	\$123,600	\$123,600		\$115,200	\$128,000	\$153,600	\$153,600	\$153,600		\$141,300	\$157,000	\$188,400	\$188,400	\$188,400	
Earnings or (losses)	\$ (86,959)	\$ (51,125)	\$ (39,804)	\$ (29,904)	\$ (29,904)		\$ (84,430)	\$ (39,230)	\$ (29,678)	\$ (13,978)	\$ (13,978)		\$ (75,241)	\$ (16,280)	\$ (9,006)	\$ 13,494	\$ 13,494	

¹ Rotations are as follows: c-c = 900 acres continuous corn; c-b = 500 acres rotation corn - 500 acres soybeans; c-b, c-w = 400 acres corn - 400 acres soybeans plus 200 acres corn - 200 acres wheat; c-b, c-w, dc = 400 acres corn - 400 acres soybeans plus 200 acres corn - 200 acres wheat, double crop beans (dc).

² Crops contribution margin is per acre contribution margin from Table 1 times number of acres.

³ Government payment includes the direct payment and the counter cyclical payment. The per bushel direct payment rate is \$0.28 for corn, \$0.44 for soybeans, and \$0.52 for wheat. Direct payment yields for corn were 94.5, 110.5, 136.6 on low, average, and high soils. Direct payment yields for soybeans were 31.7, 37.0, and 45.8 for low, average, and high soils. Direct payment yields for wheat were 45.8, 49.3, 55.5 on low, average, and high soils. The counter cyclical payments were based on a target price of \$2.63 for corn, \$5.80 for soybeans, and \$3.92 for wheat. The average marketing year price assumed was \$2.36 for corn, \$6.40 for soybeans, and \$3.85 for wheat. The counter cyclical yields for corn were 108.1, 133.4, and 164.1 for low, average, and high soils. The counter cyclical yields for soybeans were 36.2, 44.7, and 55.0 for low, average and high soils. The counter cyclical yields for wheat were 59.5, 66.7, 73.8 for low, average, and high soils. A base acre of each acre of crop raised was assumed.

⁴ The same basic machinery set, which is timely for each rotation, is used on all four farms of the same soil type. A no-till drill is added for beans, and a larger combine platform is added for double-crop beans. Average annual replacement costs were calculated using the Purdue Machinery Cost Calculator for timely set of fall plow or chisel tillage. Replacement costs for no-till are about 75% of fall chisel tillage. Seven-year trading policy assumed for combine and planter, 10-year policy for other field machinery. On livestock farms where fewer hours each day are available for crops, or on small farms, machinery costs and/or labor costs will be higher. On well drained soils where more days are suitable for spring field work, machinery costs could be lower.

⁵ Labor expenses include a family living withdrawal of \$24,139 (\$48,855 of family living expenses less \$24,716 in net nonfarm income reported by Illinois Farm Business Farm Management Association records in 2002) and \$12,000 for part-time hired labor.

⁶ Based on cash rent at \$103 per acre on low yield soil, \$128 per acre on average yield soil, and \$157 per acre on high yield soil.

Prepared by W. Alan Miller and Craig L. Dobbins
 Department of Agricultural Economics, Purdue University

Purdue University is an equal opportunity/equal access institution.

January 2005 Purdue Crop Cost & Return Guide

Table 1. Estimated per Acre Crop Budgets for Low, Average, and High Productivity Indiana Soils

	Crop Budgets for Three Yield Levels ¹											
	Low Productivity Soil						Average Productivity Soil					
	Cont. Corn	Rot. Corn	Rot. Beans	Second- Year Beans	Wheat	DC Beans	Cont. Corn	Rot. Corn	Rot. Beans	Second- Year Beans	Wheat	DC Beans
Expected yield per acre ²	104.0	115.5	37.1	33.4	61.5	21.0	128.7	143.0	46.0	41.4	68.6	25.7
Harvest price ³	\$2.12	\$2.12	\$5.23	\$5.23	\$2.88	\$5.23	\$2.12	\$2.12	\$5.23	\$5.23	\$2.88	\$5.23
Market Revenue	\$220	\$245	\$194	\$175	\$177	\$110	\$273	\$303	\$241	\$217	\$198	\$134
Loan Deficiency Payment (LDP) ⁴	0	0	0	0	0	0	0	0	0	0	0	0
Total revenue	\$220	\$245	\$194	\$175	\$177	\$110	\$273	\$303	\$241	\$217	\$198	\$134
Less variable costs ⁵												
Fertilizer ⁶	\$53	\$51	\$22	\$20	\$44	\$14	\$67	\$66	\$26	\$24	\$50	\$16
Seed ⁷	29	29	36	36	21	42	34	34	36	36	21	42
Chemicals ⁸	34	16	14	14	N/A	11	36	19	14	14	N/A	11
Dryer Fuel & Handling	16	14	1	1	N/A	3	20	17	1	1	N/A	3
Machinery Fuel @ \$1.55	11	11	11	11	6	5	12	12	12	12	6	5
Machinery Repairs ⁹	9	9	2	2	4	4	10	10	10	10	5	4
Hauling ¹⁰	6	7	2	2	4	1	8	9	3	2	4	2
Interest ¹¹	11	5	4	4	3	4	7	6	4	4	4	4
Insurance/misc.	11	11	8	8	7	4	11	11	8	8	4	4
Total variable cost ¹¹	\$175	\$153	\$107	\$105	\$89	\$88	\$205	\$184	\$114	\$111	\$98	\$91
Contribution margin ¹¹	\$45	\$92	\$87	\$70	\$88	\$22	\$68	\$119	\$127	\$106	\$100	\$43
Revenue - variable costs	\$45	\$92	\$87	\$70	\$88	\$22	\$68	\$119	\$127	\$106	\$100	\$43

¹Estimated yields and costs are for yields with average management for three different soils representing low, average, and high productivity. On each soil, these estimated yields may vary \pm 10% for management, and \pm 10% for plant/harvest date. These yields assume average weather conditions.

²Average yield based on timely plant/harvest date, except soybean double crop yield, which is based on July 1 plant date. Continuous corn, soybean, and wheat yields are a percent of rotation corn yield: continuous corn 90%, drill soybeans 33.5% (second year drill beans or for 30-inch beans in central Indiana 30.2%), wheat 53% on low yield, 48% on average yield, and 43% on high yield soils; and double crop soybeans (South-central Indiana) 18% (Source: ID-152 "Estimating Potential Yield for Corn, Soybeans, and Wheat").

³Harvest corn price is December 2005 CBOT futures price less \$0.25 basis. Harvest soybean price is November 2005 CBOT futures price less \$0.30 basis. Harvest wheat price is July 2005 CBOT futures price less \$0.30 basis. Loan rates are \$2.01 for corn, \$5.12 for soybeans, and \$2.49 for wheat.

⁴Seed, fertilizer, chemical, and fuel prices are early January 2005 quotes.

⁵Fertilizer based on tri-state fertilizer recommendations (Source: Michigan Extension Bulletin E-2567, July 1995). Lime amounts represent the pounds of standard ag lime needed to neutralize the acidity from the nitrogen supplied from sources other than ammonium sulfate. Pounds of N-P₂O₅-K₂O-lime by crop and soil: continuous corn, 115-39-48-3-6, 149-48-55-4-7, 185-59-63-5-6; rotation corn, 101-43-51-3-0, 139-53-59-4-15, 183-65-68-5-50; rotation beans, 0-30-72-0, 0-37-84-0, 0-46-101-0; wheat, 60-39-43-1-80, 73-43-45-2-18, 85-48-48-3-56; double crop beans, 0-17-49-0, 0-21-57-0, 0-26-65-0. Fertilizer prices per lb.: NH₃ @ \$0.26; P₂O₅ @ \$0.30; K₂O @ \$0.18; lime @ \$16/ton. 5-10% more nitrogen might be needed on both excessively and poorly drained soils. All soil tests for phosphorus and potassium are in the maintenance range, and the pH is in the recommended range. The potash recommendations are for a light color loam or silt loam soil with a Cation Exchange Capacity (CEC) of 10. This recommendation will vary with CEC.

⁶Add \$7 per acre for Bt corn seed. Soybean seed prices include Round-Up Ready Varieties.

⁷Corn insecticide @ \$17.80 per acre is included for continuous corn and should be added to rotation corn in northern Indiana.

⁸Repairs are based on approximately five-year-old machinery. For older machinery, per acre repairs and downtime cost will be \$6-10 higher, and indirect machinery costs will be lower.

⁹Interest is based on 6.5% annual rate for 9 months for seed, fertilizer, and chemicals, and for 6 months for half the machinery fuel and repairs and all the insurance/misc.

¹⁰Contribution margin is the return to the unpaid operator labor/management, machinery services, and land resources.

January 2005 Purdue Crop Cost & Return Guide

Table 2. Estimated per Farm Crop Budgets for Low, Average, and High Productivity Indiana Soils

Farm Acres	Effect on Earnings for Each of Four Crop Rotations on Three Soil Types Using Similar Machinery and Labor When Farm Size Is Adjusted to Permit Timely Fieldwork ¹											
	Low Productivity Soil						Average Productivity Soil					
	900 c-c	1000 c-b	1200 c-b, c-w	1200 c-b, c-w, dc	900 c-c	1000 c-b	1200 c-b, c-w	1200 c-b, c-w, dc	900 c-c	1000 c-b	1200 c-b, c-w	1200 c-b, c-w, dc
Rotation												
Crop contribution margin ²	\$40,500	\$89,500	\$107,600	\$112,000	\$61,200	\$123,000	\$142,200	\$150,800	\$90,000	\$165,000	\$185,800	\$200,200
Government payment ³	30,168	22,690	32,450	32,450	35,919	26,875	38,016	38,016	44,325	33,190	45,852	45,852
Total contribution margin	\$70,668	\$112,190	\$140,050	\$144,450	\$97,119	\$149,875	\$180,216	\$188,816	\$134,325	\$198,190	\$231,652	\$246,052
Annual overhead costs:												
Machinery replacement ⁴	45,000	48,500	48,500	49,000	48,600	52,100	52,100	52,600	54,000	57,500	57,500	58,000
Drying/handling	6,300	6,300	6,300	6,300	7,200	7,200	7,200	7,200	8,100	8,100	8,100	8,100
Family and hired labor ⁵	39,000	39,000	39,000	39,000	39,000	39,000	39,000	39,000	39,000	39,000	39,000	39,000
Land ⁶	\$94,500	\$105,000	\$126,000	\$126,000	\$116,100	\$129,000	\$154,800	\$154,800	\$113,400	\$160,000	\$192,000	\$192,000
Earnings or (losses)	-\$114,132	-\$86,610	-\$79,750	-\$75,850	-\$113,781	-\$77,425	-\$72,884	-\$64,784	-\$80,175	-\$66,410	-\$64,948	-\$51,048

¹Rotations are as follows: c-c = 900 acres continuous corn; c-b = 500 acres rotation corn - 500 acres soybeans; c-b, c-w = 400 acres corn - 400 acres soybeans plus 200 acres corn - 200 acres wheat; c-b, c-w, dc = 400 acres corn - 400 acres soybeans plus 200 acres corn - 200 acres wheat, double crop beans (dc).

²Crops contribution margin is per acre contribution margin from Table 1 times number of acres.

³Government payment includes the direct payment and the counter cyclical payment. The per bushel direct payment rate is \$0.28 for corn, \$0.44 for soybeans, and \$0.52 for wheat. Direct payment yields for corn were 94.5, 110.5, 136.6 on low, average, and high soils. Direct payment yields for soybeans were 31.7, 37.0, and 45.8 for low, average, and high soils. Direct payment yields for wheat were 45.8, 49.3, 55.5 on low, average, and high soils. The counter cyclical payments were based on a target price of \$2.63 for corn, \$5.80 for soybeans, and \$3.92 for wheat. The average marketing year price assumed was \$2.23 for corn, \$5.66 for soybeans, and \$3.08 for wheat. The counter cyclical yields for corn were 108.1, 133.4, and 164.1 for low, average, and high soils. The counter cyclical yields for soybeans were 36.2, 44.7, and 55.0 for low, average and high soils. The counter cyclical yields for wheat were 59.5, 66.7, 73.8 for low, average, and high soils. A base acre of each acre of crop raised was assumed.

⁴The same basic machinery set, which is timely for each rotation, is used on all four farms of the same soil type. A no-till drill is added for beans, and a larger combine platform is added for double-crop beans. Average annual replacement costs were calculated using the Purdue Machinery Cost Calculator for timely set of fall plow or chisel tillage. Replacement costs for no-till are about 75% of fall chisel tillage. Seven-year trading policy assumed for combine and planter, 10-year policy for other field machinery. On livestock farms where fewer hours each day are available for crops, or on small farms, machinery costs and/or labor costs will be higher. On well-drained soils where more days are suitable for spring field work, machinery costs could be lower.

⁵Labor expenses include a family living withdrawal of \$26,989, (\$52,908 of family living expenses less \$25,919 in net nonfarm income. Values are reported in *Farm Income & Production Costs for 2003*, University of Illinois Extension, AE-4566, April 2004) and \$12,000 for part-time hired labor.

⁶Based on cash rent at \$105 per acre on low yield soil, \$129 per acre on average yield soil, and \$160 per acre on high yield soil.

Prepared by Craig L. Dobbins and W. Alan Miller
Department of Agricultural Economics, Purdue University

It is the policy of the Purdue University Cooperative Extension Service, David C. Petritz, Director, that all persons shall have equal opportunity and access to the programs and facilities without regard to race, color, sex, religion, national origin, age, marital status, parental status, sexual orientation, or disability. Purdue University is an Affirmative Action employer. This material may be available in alternative formats. February, 2005

Calculation of Average Government Payments per Acre

	2000	2001	2002	2003	2004	2005
Total Government Payment	(1) 938,464,000	(2) 925,859,000	(2) 334,320,000	(2) 446,286,000	(2) 532,055,000	(2) 914,166,000
Less Milk Income Loss Pymt	0	0	(3) -13,609,000	(3) -16,138,000	(3) -3,025,000	(3) -277,000
Net Government Payment	938,464,000	925,859,000	320,711,000	430,148,000	529,030,000	913,889,000
Cropland Acres	(4) 12,848,950	(4) 12,848,950	(4) 12,848,950	(5) 12,909,002	(5) 12,909,002	(5) 12,909,002
Pymt Per Acre	73.04	72.06	24.96	33.32	40.98	70.79

Source:

Indiana Agricultural Statistics Service

IASS - Page 8 (1)

Ag. Stats. 04-05

IASS - Page 8 (2)

Ag. Stats. 05-06

Less Milk Income Loss Pymt. (3)

IASS - Page 8

Ag. Stats. 05-06

IASS - Page 105 (4)

Ag. Stats. 02-03

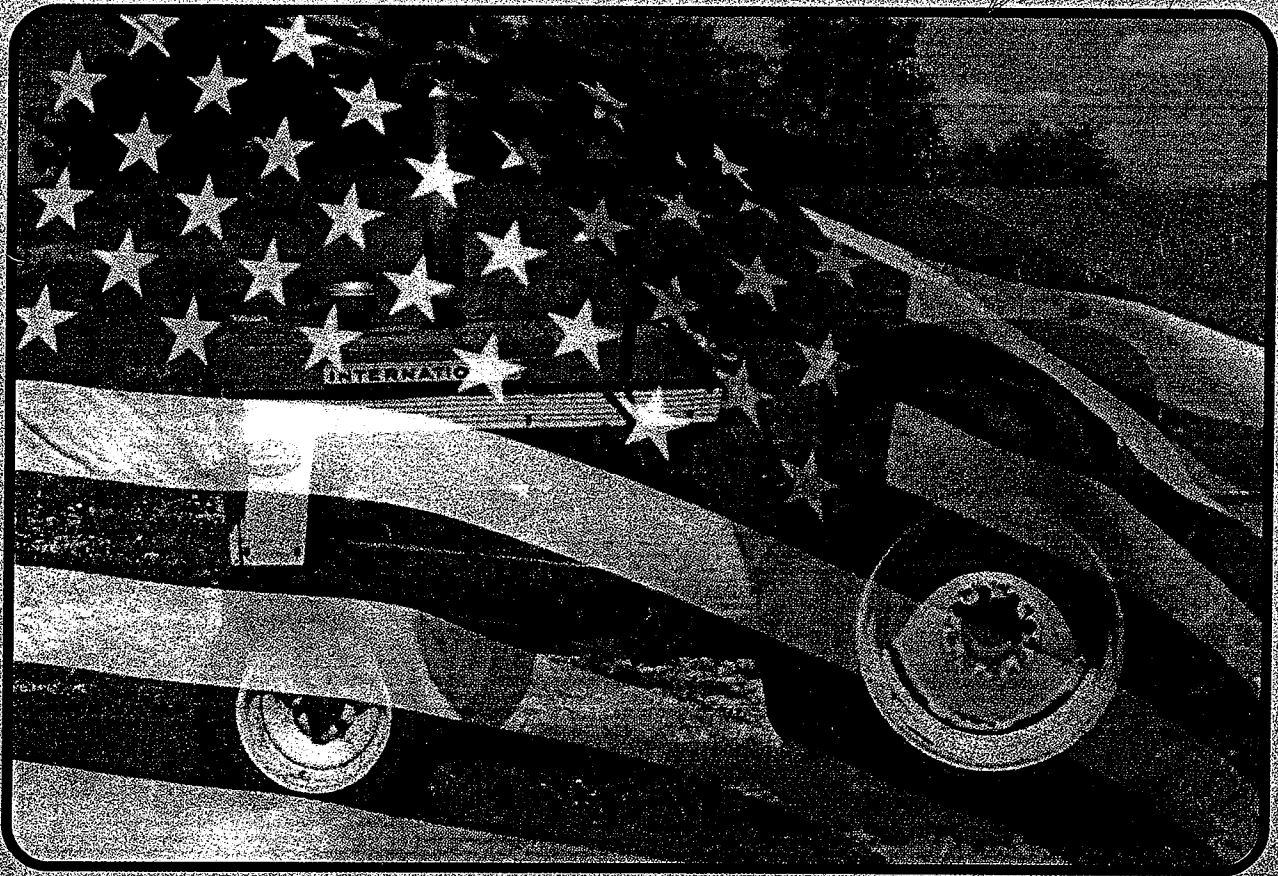
IASS - Page 105 (5)

Ag. Stats. 05-06

INDIANA

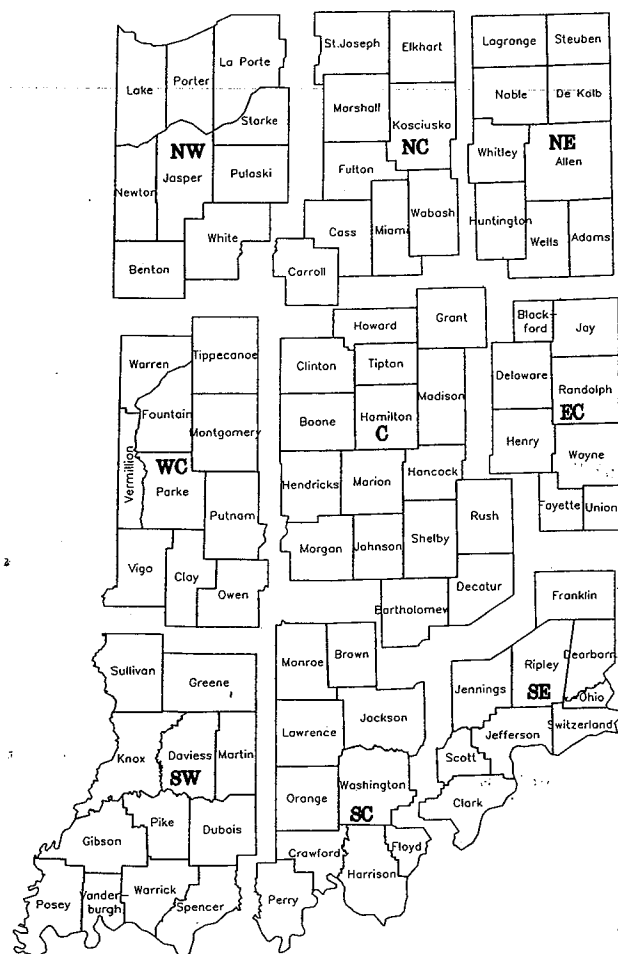
AGRICULTURAL STATISTICS 2002-2003

*Donna
McKinney*



"The American Farmer"

COUNTY HIGHLIGHTS



COUNTY HIGHLIGHTS

The following pages of county statistics represent the results of a survey of over 11,000 farm operators following the 2002 harvest season. In addition to these data are selected items of interest from the 2000 U.S. Population Census, 1997 Census of Agriculture, and 2001 Cash Receipts information. The County Highlights' section summarizes the importance of agriculture to each and every Indiana county while comparing the magnitude of importance across counties.

Planted acreage for hay and tobacco are represented by three dashes because these categories are not estimated, planted acreage and yield for popcorn are represented by three dashes because these categories are not surveyed; in all other places the three dashes represent zero for that county. An asterisk signifies that the county has data for this item, but it cannot be disclosed for confidentiality purposes. The 1997 Chicken data from Census includes only layers and pullets thirteen weeks old and older.

Below is a list of comparable items at the state level.

STATE DATA

2000 Census Population	6,080,485	2001 Cash Receipts	\$5,228,584,000
1997 Total Land Area (acres)	22,956,877	Crop Receipts	\$3,207,211,000
1997 Number of Farms	57,916	Livestock Receipts	\$2,021,373,000
1997 Land in Farms (acres)	15,111,022		
1997 Average Size of Farm (acres)	261	2001 Other Income	\$1,466,664,000
		Government Payments	\$938,464,000
1997 Value of Land & Bldgs (avg/acre)	\$2,064	Imputed Income/Rent Received	\$541,386,000
1997 Cropland (acres)	12,848,950		
1997 Harvested Cropland (acres)	11,716,704	2001 Total Income	\$6,695,248,000
1997 Pastureland, all types (acres)	1,254,525	Less: Production Expenses	\$6,212,167,000
1997 Woodland (acres)	1,283,246	Realized Net Income	\$483,081,000

2002 CROPS	PLTD	HARV	YLD	UNIT	PROD	LIVESTOCK	NUMBER HEAD
Corn	5,400,000	5,220,000	121	Bu	631,620,000	Jan 2003 All Cattle	860,000
Soybeans	5,800,000	5,750,000	41	Bu	235,750,000	Beef Cows	230,000
Wheat	350,000	330,000	53	Bu	17,490,000	Milk Cows	145,000
Hay	---	600,000	2.66	Ton	1,596,000	1997 All Hogs	3,972,060
Tobacco	---	4,000	2000	Lbs	8,000,000	1997 All Sheep	54,227
1997 Popcorn	---	78,519	---	Lbs	214,059,865	1997 Chickens	22,731,425
						1997 Turkeys	4,758,760

INDIANA



AGRICULTURAL STATISTICS
2004-2005

FARM INCOME

U.S. GOVERNMENT PAYMENTS, BY PROGRAM INDIANA, 1999-2004 1/

Program	1999	2000	2001	2002	2003	2004
Thousand Dollars						
Production Flexibility Contracts	207,580	203,645	162,777	144,953	(9,979)	(143)
Direct Payments 2/	---	---	---	13,875	317,368	232,557
Counter-cyclical Program Payments	---	---	---	---	27,053	23,742
Loan Deficiency Payments	306,400	362,103	407,830	76,710	2,631	208,965
Milk Income Loss Payments 3/	---	---	---	13,814	16,138	3,025
Conservation 4/	26,597	29,528	42,294	49,938	50,209	54,185
Supplemental Funding 5/	258,462	298,183	271,997	10,858	42,159	1,756
Miscellaneous 6/	10,500	291	130	28	(39)	(90)
Marketing Loan Gains	42,513	44,714	40,249	22,605	746	5,633
Total	852,051	938,464	925,278	332,782	446,285	529,630

1/ Amounts include only cash payments made directly to farmers.

2/ Direct Payments are authorized by the Farm Security and Rural Investment Act of 2002 for 2002 through 2007 crops. Direct Payments for the 2002 crops are reduced by the amount of fiscal year 2002 payment received under Production Flexibility Contracts. The Act also increases the number of crops authorized to receive Direct Payments.

3/ Program authorized by the Farm Security and Rural Investment Act of 2002.

4/ Includes amount paid under Conservation Reserve, Agriculture Conservation, Emergency Conservation, and Great Plains Program.

5/ Accounts for the supplemental funding provided by the Agricultural Risk Protection Act of 2000, Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Act 2001 and Agricultural Economic Assistance Act 2001. Some of these programs include; Crop Disaster Program, Dairy Disaster Assistance Program, Livestock Emergency Assistance program, Quality Losses Program, and Tobacco Disaster Assistance Program

6/ Miscellaneous Programs include; Forestry Incentive Annual, Dairy Indemnity, Interest Payments, Disaster Program Payments, Payment Limitation Refund, Noninsured Assistance, Disaster Reserve, and Environment Quality Incentives.

Source: Economic Research Service

FARM BUSINESS DEBT INDIANA, DECEMBER 31, 1998-2003

Item	1998	1999	2000	2001	2002	2003
Million Dollars						
Total Farm Debt 1/	5,276.0	5,405.0	5,655.0	5,916.0	6,199.0	6,390.7
Real Estate	3,230.2	3,400.4	3,526.2	3,708.1	3,978.9	4,162.9
Farm Credit System	890.5	940.2	981.2	1,085.8	1,249.7	1,325.0
Farmers Service Agency	101.9	96.1	92.1	90.5	86.0	77.0
Commercial Banks	1,125.0	1,231.5	1,328.7	1,387.9	1,476.2	1,568.5
Life Insurance Companies	306.9	328.3	328.0	332.5	338.9	344.1
Individuals and Others	805.9	804.3	796.1	811.4	828.1	848.4
Nonreal Estate	2,045.8	2,004.6	2,128.8	2,208.0	2,220.1	2,227.8
Farm Credit System	442.3	401.3	403.8	465.4	477.6	486.4
Farmers Service Agency	62.9	62.7	60.6	59.0	56.5	54.1
Commercial Banks	982.7	963.2	1,044.8	1,048.8	1,032.9	1,014.2
Individuals and Others	557.9	577.4	619.6	634.8	653.1	673.1

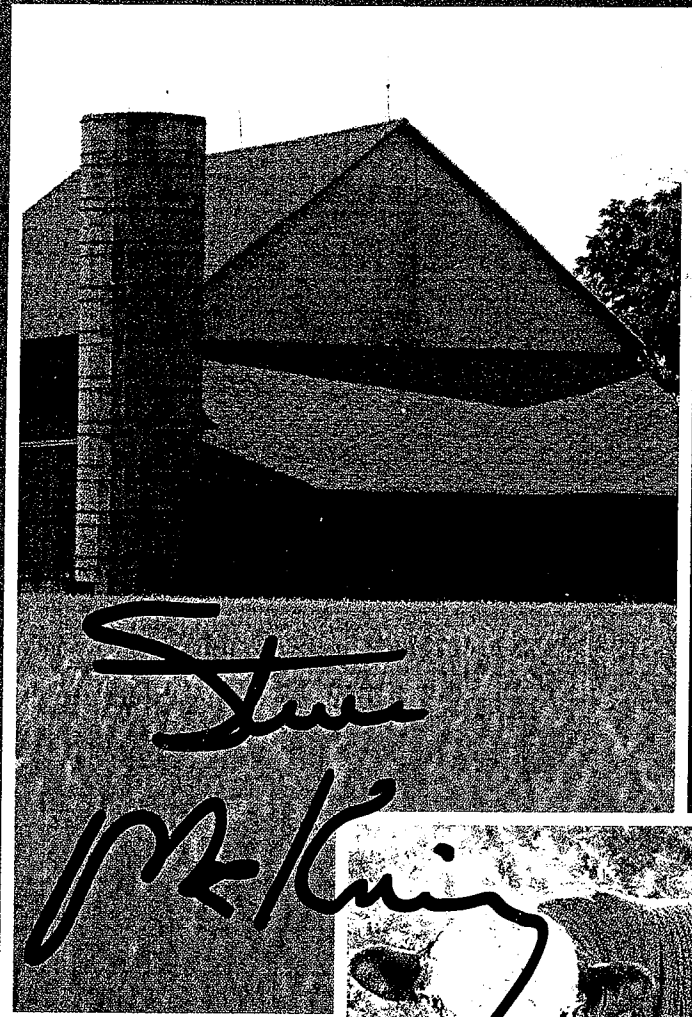
1/ Excludes debt for nonfarm purposes.

Source: Economic Research Service

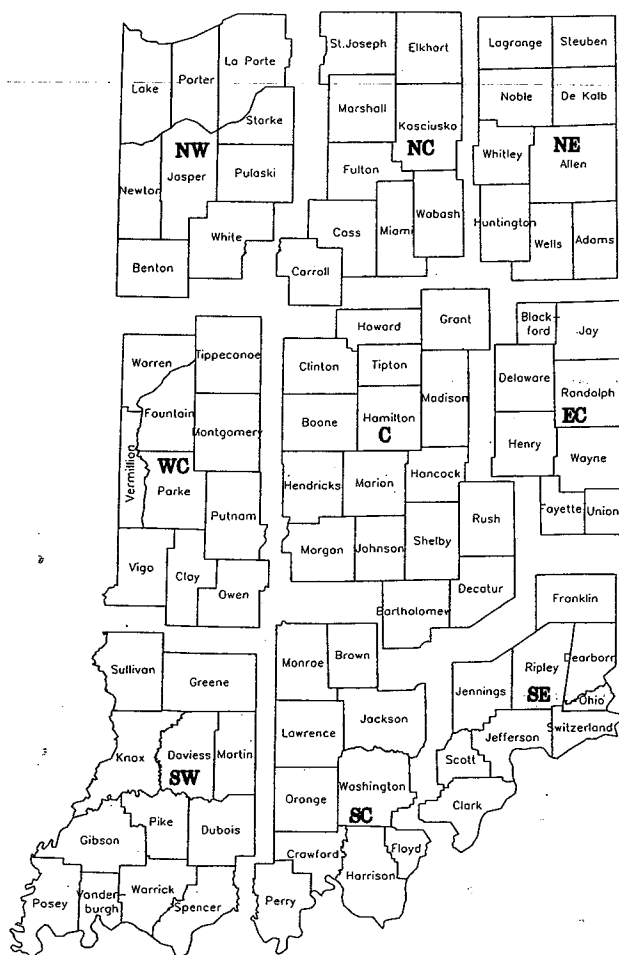
INDIANA

AGRICULTURAL STATISTICS

2005-2006



COUNTY HIGHLIGHTS



COUNTY HIGHLIGHTS

The following pages of county statistics represent the results of a survey of over 11,000 farm operators following the 2004 harvest season. In addition to these data are selected items of interest from the 2000 U.S. Population Census, 2002 Census of Agriculture, and 2003 Cash Receipts information from the Bureau of Economics Analysis. The County Highlights section summarizes the importance of agriculture to each and every Indiana county while comparing the magnitude of importance across counties.

Planted acreage for hay and tobacco are represented by three dashes because these categories are not estimated, planted acreage and yield for popcorn are represented by three dashes because these categories are not surveyed; in all other places the three dashes represent zero for that county. An asterisk signifies that the county has data for this item, but it cannot be disclosed for confidentiality purposes. The 2002 Chicken data from Census includes only layers twenty weeks old and older.

Below is a list of comparable items at the state level.

STATE DATA

2000 Census Population	6,080,485
2002 Total Land Area (acres)	22,945,817
2002 Number of Farms	60,296
2002 Land in Farms (acres)	15,058,670
2002 Average Size of Farm (acres)	250
2002 Value of Land & Bldgs (avg/acre)	\$2,567
2002 Cropland (acres)	12,909,002
2002 Harvested Cropland (acres)	11,937,370
2002 Pastureland, all types (acres)	1,098,301
2002 Woodland (acres)	1,153,779

2003 Cash Receipts	\$5,142,082,000
Crop Receipts	\$3,192,071,000
Livestock Receipts	\$1,950,011,000
2003 Other Income	\$694,312,000
Government Payments	\$446,374,000
Imputed Income/Rent Received	\$247,938,000
2003 Total Income	\$5,836,394,000
Less: Production Expenses	\$5,319,439,000
Realized Net Income	\$516,955,000

2004 CROPS	PLTD	HARV	YLD	UNIT	PROD
Corn	5,700,000	5,530,000	168	Bu	929,040,000
Soybeans	5,500,000	5,520,000	52	Bu	287,040,000
Wheat	450,000	440,000	62	Bu	27,280,000
Hay	---	660,000	3.49	Ton	2,303,000
Tobacco	---	4,200	2050	Lbs	8,610,000
2002 Popcorn	---	69,207	---	Lbs	219,836,706

LIVESTOCK	NUMBER HEAD
Jan 2005 All Cattle	850,000
Beef Cows	230,000
Milk Cows	155,000
2002 All Hogs	3,478,570
2002 All Sheep	61,620
2002 Chickens	21,952,110
2002 Turkeys	3,848,054

FARM INCOME

CASH INCOME, INDIANA, 2001-2005

Item	2001	2002	2003	2004	2005
Thousand Dollars					
Cash Receipts for All Crops	3,228,304	3,180,395	3,204,879	4,027,671	3,537,003
Cash Receipts for All Livestock & products	1,831,201	1,535,527	1,797,770	2,068,756	2,042,916
Cash Receipts for All Commodities	5,059,505	4,715,922	5,002,649	6,096,427	5,579,919
Gross Farm Income	6,697,643	5,524,469	6,440,090	8,025,056	7,283,118
Production Expenses	5,456,929	5,010,818	5,146,342	5,479,029	5,892,979
Cash Income:					
Gross Cash Income	6,205,432	5,302,971	5,730,295	6,872,945	6,701,279
Cash Production Expenses	4,683,968	4,202,516	4,342,581	4,603,353	4,978,821
Net Cash Income	1,521,464	1,100,455	1,387,714	2,269,592	1,722,458
Check Totals					
Net Farm Income	1,240,714	513,651	1,293,748	2,546,027	1,390,139
Discrepancy in Net Farm Income	0	0	0	0	0
Net Cash Income	1,521,464	1,100,455	1,387,714	2,269,592	1,722,458
Discrepancy in Net Cash Income	0	0	0	0	0
Cash Receipts for Inventory Crops +change in inventory (food grains, feed crops, & oil crops)	2,835,360	2,479,602	3,007,520	4,132,546	3,024,398

Source: Economic Research Service

U.S. GOVERNMENT PAYMENTS, BY PROGRAM INDIANA, 2001-2005 1/

Program	2001	2002	2003	2004	2005
Thousand Dollars					
Production Flexibility Contracts	162,777	145,198	(9,979)	(143)	(60)
Direct Payments 2/	---	13,933	317,368	232,556	233,838
Counter-cyclical Program Payments	---	---	27,053	23,742	192,993
Loan Deficiency Payments	407,830	77,032	2,631	208,965	333,384
Marketing Loan Gains	40,249	22,820	746	5,633	17,450
Commodity Certificate Exchange Gains	581	141	1	2,426	8,444
Milk Income Loss Payments 3/	---	13,609	16,138	3,025	277
Tobacco Transition Payments 4/	---	---	---	---	20,675
Conservation 5/	42,198	50,538	50,209	54,185	67,995
Supplemental Funding 6/	272,093	11,021	42,159	1,756	39,014
Miscellaneous 7/	130	28	(39)	(90)	(44)
Total	925,859	334,320	446,286	532,055	914,166

1/ Amounts include only cash payments made directly to farmers.

2/ Direct Payments are authorized by the Farm Security and Rural Investment Act of 2002 for 2002 through 2007 crops. Direct Payments for the 2002 crops are reduced by the amount of fiscal year 2002 payment received under Production Flexibility Contracts. The Act also increases the number of crops authorized to receive Direct Payments.

3/ Program authorized by the Farm Security and Rural Investment Act of 2002.

4/ Payment includes both the CCC payments to quota holders and producers and the third party payments to quota holders and producers who opted for the lump-sum payment option.

5/ Includes amount paid under Conservation Reserve, Agriculture Conservation, Emergency Conservation, and Great Plains Program.

6/ Ad Hoc and emergency programs provided by the Agricultural Risk Protection Act of 2000, Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Act 2001 and Agricultural Economic Assistance Act 2001. Some of these programs include: Crop Disaster Program, Dairy Disaster Assistance Program, Livestock Emergency Assistance program, Quality Losses Program, and Tobacco Disaster Assistance Program.

7/ Miscellaneous Programs include: Forestry Incentive Annual, Dairy Indemnity, Interest Payments, Disaster Program Payments, Payment Limitation Refund, Noninsured Assistance, Disaster Reserve, and Environment Quality Incentives.

Source: Economic Research Service

AN OVERVIEW OF HOW THE CALENDAR IS USED IN CALCULATING THE AG LAND BASE RATE

<u>SPRING, 2006</u>	<u>SUMMER, 2006</u>	<u>FALL, 2006</u>	<u>WINTER, 2006</u>	<u>SPRING, 2007</u>	<u>SUMMER, 2007</u>
Planting 2006 crops	Care for 2006 crops	Harvest 2006 crops	Prep equipment for storage	Planting 2007 crops	Care for 2007 crops
Sell a portion of his 2005 crops	Sell remainder of his 2005 crops	Sell a portion of his 2006 crops	Sell a portion of his 2006 crops	Sell a portion of his 2006 crops	Sell remainder of his 2006 crops
Paying 3/1/05 Property Taxes		Paying 3/1/05 Property Taxes		Paying 3/1/06 Property Taxes	
Collect portion of 2006 Cash Rent		Collect remainder of 2006 Cash Rent		Collect portion of 2007 Cash Rent	

CASH RENT INCOME - CALENDAR YEAR

OPER. INCOME -
1/3 NOVEMBER
GRAIN PRICES

OPERATING INCOME - 1/3 MARKET YEAR AVERAGE OF GRAIN PRICES

OPERATING INCOME - 1/3 CALENDAR YEAR AVERAGE OF GRAIN PRICES